

Broad Agency Announcement National Defense Stockpile Research DLA STRATEGIC MATERIALS BAA-DLASM-2018-2019-01 March 01, 2018

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## BROAD AGENCY ANNOUNCEMENT (BAA) FOR DEFENSE LOGISTICS AGENCY (DLA) STRATEGIC MATERIALS NDS RESEARCH

#### POINT OF CONTACT (POC): Mark Andrews, Contract Specialist DLA-Strategic Materials Andrew T. McNamara Building 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 571-767-3665 SMContracting@dla.mil

## BAA-DLASM-2018-2019-01

**Notice Type:** Broad Agency Announcement (BAA) FY2018 and FY2019 Research Requirements. This notice constitutes a solicitation for a BAA to acquire research expertise in accordance with Federal Acquisition Regulation (FAR) 35.016 *Broad Agency Announcement*, as supplemented with additional information included in this notice. No formal solicitation will be issued. Only the information provided in this notice is available. Requests for solicitations shall be disregarded. It is intended that this BAA be open for a period from March 01, 2018 to September 30, 2019.

## 1. BACKGROUND

DLA Strategic Materials is charged with maintaining cognizance of worldwide strategic and critical materials supply chain conditions from the source to final assembly, evaluating the capability of these supply chains to support national defense and essential civilian industries and developing mitigation solutions when access to materials are insufficient to provide support for national defense and emergency response. DLA defines its annual research requirements in the National Defense Stockpile (NDS) Annual Materials Plan (AMP) (Title 50 U.S.C. 98 *et seq.* Section 11(b) (1)) and obtains funding from the National Defense Stockpile Transaction Fund. These planned requirements produce a robust logistics research process addressing areas such as geographic locations of deposits and reserves, global mining and refining capabilities, worldwide consumption patterns and the impact of those factors on supply chains that support defense and essential civilian industries. The large number of materials and derivatives that are used in these applications require vast and dynamic research efforts with substantial flexibility to expand, contract and change direction.

DLA Strategic Materials' need for this BAA stems from emerging and rapidly expanding requirements to restore and stabilize strategic and critical materials supply chains that have been compromised by decreased or abandoned domestic mining and refining activities or lack of domestic reserves within the United States. Most of these requirements are in the form of research of materials and alloys and development of solutions including stockpiling, substitution, and/or conservation. Other emergent requirements come from Military Services, Office of the Secretary of Defense (OSD) and Congressional requests for information on the availability of specific materials. These requirements can address virtually any critical or strategic materials topic and each year generally presents a mixture of new projects and different materials.

This BAA is issued under the provisions of Parts 35.016 and 6.102(d) (2) (i) and (ii) of the Federal Acquisition Regulation (FAR), which provides for the competitive selection of proposals submitted in response to this announcement. Accordingly, proposals selected for award are considered to be the result of full and open competition and fully compliant with PL 98-369, entitled "The Competition in Contracting Act of 1984."

This BAA is an expression of interest only and does not commit the Government to make an award or pay proposal preparation prices generated in response to this announcement. The price of proposal preparation for response to a BAA is not considered an allowable direct charge to any resultant contract or any other contract.

No contract award will be made unless funds are available. Prospective Offerors are reminded that only a duly warranted Contracting Officer may obligate the Government to an agreement involving expenditure of Government funds. Only the information provided in this notice is available. No formal solicitation will be issued. Only Firm-Fixed Price contracts will be awarded. No award is expected to exceed \$250,000.

## 2. AREAS OF INTEREST

The requirements that are the subject of this BAA are the following functions as they apply to the materials listed on Exhibit A:

- (1) Mining:
  - (a) Analyses of the origin of materials tapped and untapped with respect to geographic proximity, proximity to refiners/processors and geopolitical control in the source regions.
  - (b) Surveys and assessments of the character and condition of existing mines, including level of sophistication, age, efficiency, output and ownership/controls.
  - (b) Analyses of the quantities of materials remaining to be recovered from active mines.
  - (c) Surveys and assessments of existing mines that are played out or that have ceased operation for economic or environmental reasons.
  - (e) Assessments of regions that have known deposits where new mining operations could be established; include consideration of economic and geopolitical conditions.
- (2) Refining and Processing:
  - (a) Surveys and assessments of international and domestic refining and processing facilities; including plant locations, size, normal and maximum production capacity, proximity to mines, storage capabilities, access to transportation hubs, and types of transportation resources most commonly used.

- (b) Survey and assessments of the character of existing refining and processing operations including ownership, product line diversity, age and efficiency of plant and equipment, availability of skilled staff resources, financial stability, and/or probability that the company will continue to produce assessed materials.
- (c) Research, assess and evaluate emerging processes to enhance the quality of materials, improve efficiency of production processes, or mitigate recurring problems.
- (d) Research, assess and evaluate causes, impacts and solutions to external "bottlenecks" in raw material supply chains addressing materials that have been delayed, duration of the shortages, effect on production lead times, prices and impact on delivery of finished products.
- (e) Research, assess and evaluate causes, impacts and solutions to internal "bottlenecks" in materials refining processes related to converting feedstock into sellable product considering issues such as incorrect or inferior feedstock, equipment failures, lack of skilled work forces, etc.
- (3) Recycling, Conservation and Substitution Options:
  - (a) Identify and evaluate material substitutes in active use by domestic and international processors and manufacturers; include limitations and common issues associated with use of the substitute material.
  - (b) Identify and evaluate ongoing research to develop or qualify materials as acceptable substitutes including use of existing and emerging products.
  - (c) Identify and evaluate active and potential recycling opportunities, including industrial infrastructure and logistical perceived limitations.
  - (d) Identify and evaluate existing and potential conservation opportunities with impacts on materials mining, refining, processing and consumption.
- (4) Permanent Magnet Recycling:
  - (a) Identify domestic and international processor that can successfully prove the recycling methods for neodymium iron boron (NdFeB) magnets or recovery of rare earths or its alloys. The specifications should include the total rare earth metals (TREM) present in the recycled magnets.
  - (b) Identify the energy magnetic density of the recycled magnets and its application areas for defense or essential civilian. Also, packaging and storage conditions for the recycled magnets or rare earth alloys should be clearly known and specified.
  - (c) Identify the existing and future capacity for recycling of permanent magnets or recovering of rare earths or its alloys from the permanent magnets. Any existing supply chain for the source of permanent magnets should also be assessed.

- (d) Identify any current and previous efforts on permanent magnet recycling for DoD performed with any domestic or international collaborators/partners as well as any prior grants from federal or state agencies.
- (e) Identify any intellectual property (IP), patents received or in the process for the permanent magnet recycling technology related with defense or essential civilian items such as fighter jets, automobiles, or medical equipment.

## **3. CORRESPONDENCE**

All correspondence and questions on this BAA, including requests for information on how to submit a white paper or proposal as well as submission of the white paper and the proposal, should be directed by electronic mail (email) to SMContracting@dla.mil. Please reference BAA number **BAA-DLASM-2018-2019-01** in all correspondence and communications.

## 4. DUE DATES

This BAA remains open from March 1, 2018 to September 30, 2019. White papers may be submitted at any time prior to expiration of the BAA and will be reviewed and evaluated as received. White papers submitted after expiration of the BAA are "late" and will not be considered. Parties may be requested by DLA Strategic Materials to submit proposals after the review of white papers. Each request will provide a date when the proposal will be due.

## 5. GENERAL WHITE PAPER AND PROPOSAL SUBMISSION INFORMATION

DLA Strategic Materials requests interested parties to submit an initial synopsis, commonly DLA Strategic Materials is seeking unclassified, white papers referred to as a "white paper." and proposals that do not contain proprietary information. Offerors are requested to submit white papers prior to the submission of a complete, more detailed proposal. The purpose of white papers is to minimize the labor and price associated with the production of detailed proposals that have very little chance of being selected for funding. White papers may be based on fundamental research; concept formulation; assessment of processes, products and associated requirements; development, analysis and evaluation of concepts; development of associated industrial capabilities, support techniques and processes; development of associated mining or refining techniques and processes. An interested party must submit a white paper in order to be eligible for further consideration. After review of white papers DLA Strategic Materials may request certain parties to submit a full technical and price proposal; such a request does not guarantee contract award. Proposals submitted without the prior submission of a white paper will not be considered. All proposals submitted in response to this BAA will be considered based upon the evaluation criteria in this BAA. The Government reserves the right to make one, more than one, or no contract awards from this BAA.

Any responsible source capable of satisfying the Government's needs may submit a white paper, which shall be considered by DLA Strategic Materials. Historically Black Colleges and Universities (HBCU) and Minority Institutions (MI) are encouraged to submit white papers and join others in submitting white papers; however, no portion of this BAA shall be set aside for

HBCU and MI participation due to the impracticality of reserving discrete or severable areas of research in this science. Foreign-owned firms' participation is subject to foreign disclosure review procedures. Affected firms should immediately contact the contracting focal point for information if they contemplate responding.

PROSPECTIVE AWARDEE(S) SHALL BE REGISTERED IN THE SYSTEM FOR AWARD MANAGEMENT (SAM) PRIOR TO AWARD, DURING CONTRACT PERFORMANCE, AND THROUGH FINAL PAYMENT OF ANY AWARD RESULTING FROM THIS ANNOUNCEMENT. INFORMATION ON SAM REGISTRATION IS AVAILABLE AT <u>HTTPS://WWW.SAM.GOV/</u>.

## 6. WHITE PAPER PREPARATION AND SUBMISSION INSTRUCTIONS

(1) Offerors should submit white papers via email directly to the following email address and call 571-767-6500 to advise of submission. Please note that if no call is received, your submission may not be reviewed.

Point of Contract: <u>SMContracting@dla.mil</u>

- (a) White papers must be in the following format but do not require any special forms:
  - Single PDF formatted file as an email attachment
  - Page Size: 8 <sup>1</sup>/<sub>2</sub> x 11 Inches
  - Margins 1 Inch
  - Spacing– Single
  - Font– Times New Roman, 12 point
  - Area of Interest and Number
- (2) The white paper shall not exceed five (5) pages plus one (1) cover page and one (1) single page addendum as discussed below. The white paper shall include the following:
  - Title,
  - BAA number,
  - Offeror Contact Information (primary investigator's name, phone number, email address, and company address),
  - Areas of Interest,
  - Technical Description of the Effort,
  - Identification of Risks,
  - Project Duration,
  - Preliminary Schedule, and
  - Not-to-Exceed Price.

A brief abstract with information explicitly pertinent to the proposed work must be provided in the white paper. No Government furnished information, equipment, property or data will be provided.

(3) As an addendum to the white paper, include biographical sketches (one page) of the key personnel who will perform the research, highlighting their qualifications and experience.

(4) The price portion of the white paper shall contain a "not-to-exceed" price amount of the proposed project to be completed.

## 7. EVALUATION AND DISPOSITION OF WHITE PAPERS

- (1) Evaluation Process: Offerors are advised that invitations for complete proposals may be made on the initial white paper submission and the availability of funding. As stated above, the white paper will be evaluated for the areas of interest, technical description of the effort, identification of risks, project duration, preliminary schedule, and not-to- exceed price. White papers evaluated to have significant merit may be invited to submit a complete detailed proposal.
- (2) Disposition Process: After completion of evaluation, the Offeror will be notified in writing of the results (via email). The Government may select white papers that are most promising for further consideration.

# 8. SMALL BUSINESS/SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN

Large Business concerns may be required to submit a Small Business/Small Disadvantaged Business Subcontracting Plan if their white paper is selected for further consideration. The North American Industry Classification System (NAICS) code is 541715 - Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology). The size standard for Small Business is fewer than 1,000 employees.

## 9. TECHNICAL AND PRICE PROPOSALS

The Government reserves the right to request full technical and price proposals from any, all, part of, or none of the Offerors submitting white papers. Any such request for full technical and priced proposals does not guarantee award. Decisions to select and fund certain proposals will be based on funds availability and the merits of the proposals. Additionally, to be eligible for a potential award of a contract, all prospective Offerors must meet certain minimum standards pertaining to financial resources, ability to comply with performance schedules, prior record of past performance, integrity, organizational structure, experience, operational controls, technical skills, facilities and equipment in accordance with FAR Part 9. Every effort will be made to protect the confidentiality of the proposal and any evaluations. The Offeror must mark the proposal with a protective legend in accordance with FAR 52.215-1(e), Instructions to Offerors – Competitive Acquisition (Jan 2017). NOTE: DLA Strategic Materials intends to award a Fixed Price contract as a result of any proposal selected for award.

## 10. PROPOSAL FORMAT (FOR FULL TECHNICAL AND PRICE PROPOSALS)

PROPOSALS THAT DO NOT COMPLY WITH EACH AND EVERY FORMATTING AND PAGE LENGTH REQUIREMENT OUTLINED BELOW WILL BE REJECTED, WILL NOT BE EVALUATED, AND WILL BE RATED AS UNACCEPTABLE.

Technical proposals are limited to twenty (20) single-sided pages. There is no page limit for the price proposal. Submission of proposals shall be in the following format and provide the content requested within the "Areas of Interest" section of this BAA. Offerors' proposals MUST be submitted in accordance with the instructions listed below.

Offerors shall submit one (1) electronic version (via e-mail) of the proposal in the following format: (1) Microsoft Word format; (2) 8.5" x 11" paper; (3) headers on each page to identify page content; and (4) type font shall be 12 point Times New Roman with 1 inch margins around the page. Any project Gantt charts may be submitted on larger (e.g., legal paper), as required to be readable. If less than 20 pages is required there is no penalty for submitting shorter proposals, as long as the Offeror covers all the required material. Proposals longer than 20 pages will be rejected, will not be evaluated, and will be rated as unacceptable.

The proposal should be clear and concise, and shall include sufficient detail for effective evaluation and for substantiating the validity of stated claims in the proposal. Offerors shall propose recognizing that the Government has no prior knowledge of Offeror's facilities and experience, and will base its evaluation exclusively on the merits and content of the information presented in the proposal. The only exception is that the Government reserves the right to evaluate relevant past performance not included in the technical proposal.

The proposal must be submitted in two volumes: Technical (Volume I) and Price (Volume II). The volumes shall be separate and complete so that evaluation of each may be accomplished independently. The volumes shall be written on a stand-alone basis so that its contents may be evaluated without cross-referencing. A separate technical and price proposal is required for any separate option proposed by Offerors.

- Two separate volumes consisting of:
  - 0 Volume I Technical Proposal
  - O Volume II Price Proposal
- Volume I, Technical Proposal (20 page limit)
  - Shall consist of the Proposed Project and address the Evaluation Factors as contained within this BAA.
- Volume II, Price Proposal (no page limit)
  - Shall contain price and pricing information in support of Volume I technical project.
  - The price proposal shall include all of the price information cited in Volume II Section 5 related to the Project Task.

## **VOLUME I – TECHNICAL PROPOSAL**

Technical proposals are limited to twenty (20) single-sided pages. No pricing information other than the summary of project price required in Section I of the Technical Proposal shall be contained within the technical proposal. Technical proposals shall contain the following sections:

**Table of Contents:** The table of contents shall specify, by page number, the location of information requested in these instructions. **The Table of Contents does not count toward the 20-page limit.** 

- Section I Cover Page: The Cover Page shall provide the following information: (1) BAA number; (2) Area of Interest; (3) Proposal Title; (4) Target Implementation; (5) Point of Contact, including name, telephone number, e-mail address, and mailing address (no post office box); (6) Cage Code; (7) Contractor's business type selected among the following categories: Large Business, Small Disadvantaged Business (SDB), Other Small Business, HBCU, MI, Other Educational, or Other Nonprofit; and (8) Summary of the Prices. The information contained in Section I shall be limited to one page. The Cover Page counts towards the 20-page limit and shall be labeled as Page One.
- (2) Section II Executive Summary: An Executive Summary of the Offeror's proposed project is required. This summary shall be used to gain an understanding of the overall proposal contents. It should identify and highlight significant features, summarize innovative claims and unique contribution(s) of the proposal, and include the salient points of the proposed project, including target system applications and the expected outcome improvement associated with the project. The information contained in Section II shall be limited to one page. The Executive Summary page(s) count towards the 20-page limit and shall be labeled as Page Two (and Page Three if appropriate).
- (3) Section III Statement of Work: The Offeror is required to submit a proposed SOW that accurately describes the work to be performed, is enforceable, and void of inconsistencies. If, in the Government's opinion, the Offeror's SOW does not reflect these requirements, the Government will prepare a SOW using information available in the Offeror's proposal; this process may delay the award. The SOW must be a separate and distinct part of the proposal. The proposed SOW must contain a summary description of the technical methodology as well as the task description, but not in so much detail as to make the SOW inflexible. The SOW page(s) counts towards the 20-page limit. The SOW should include the following sections: 1.0 Objective, 2.0 Scope, 3.0 Background and 4.0 Task/Technical Requirements. See exhibit B for sample formatting of SOW and exhibit C for a sample SOW.

#### (4) Section IV – Detailed Proposal Information:

Offerors shall submit a comprehensive and complete technical proposal that demonstrates its ability to perform the area of interest. The technical proposal is expected to contain written and visual material. It must be succinct, well written and presented in a clear straightforward manner. Proposals that merely restate or rephrase the white paper may be considered technically unacceptable and may not be considered further. The technical proposal shall specifically address the six evaluation areas: (1) scientific and technical merits; (2) potential relevance and contributions to the area of interest; (3) new and creative solutions, technical data and computer software; (4) capabilities, related experience, facilities, or techniques; (5) qualifications, capabilities and experience; and (6) past performance.

#### (5) Section V – Deliverables and Schedule

Offerors shall submit a list of deliverables that will be provided to the Government and a schedule for project performance and submittal of deliverables. Note that payment will be commensurate with receipt and approval of deliverable(s).

#### (6) Section VI – Past Performance References

Offerors shall submit a list of past performance references that will be provided to the Government. See exhibit D for sample information.

#### (7) Section VII – Resumes

Offerors shall include resumes of key personnel. Resumes do not count towards the 20-page limit.

#### **VOLUME II – PRICE PROPOSAL**

Price proposals have no page limitation. Offerors shall submit at a minimum the information listed below relating to price.

**Table of Contents:** The table of contents shall specify, by page number, the location of information requested in these instructions.

- (1) **Section 1 Proposal Type and Value:** The following information must be provided: type of proposal, brief work effort description, performance period, and total value.
- (2) **Section 2 Work Breakdown:** The prices proposal shall include a work breakdown structure and price data in sufficient detail to support evaluation of reasonableness (e.g., direct labor by categories, indirect labor, indirect prices, travel, subcontract, services, materials, equipment, etc.).

- (3) **Section 3 Project Task:** The price proposal shall include at a minimum all of the price information listed below.
  - (a) Direct Labor: Individual labor categories or assigned persons with associated labor hours and unburdened direct labor rates.
  - (b) Indirect Prices: Fringe Benefit, Overhead, G&A, Price of Money, etc. (base amount and rate).
  - (c) Travel: Number of trips, destinations, durations, etc.
  - (d) Material: Equipment, facilities, etc.
  - (e) Profit dollars and percentage rate.
- (4) **Section 4 Other Direct Prices**: All other prices associated with the project should be itemized.
- (5) **Section 5 Payment Plan Schedule:** Provide a proposed monthly invoice payment plan in accordance with the items listed in Section V Deliverables and Schedule, in the Technical Proposal.

The Contracting Officer plans to award without discussions. Unsuccessful Offerors may submit a written request to the Contracting point of contact for a debriefing in accordance with FAR 15.506

## **11. EVALUATION FACTORS**

Proposals received as a result of the BAA will be evaluated in accordance with evaluation criteria specified herein through a peer or scientific review process. Written evaluation reports on individual proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement and each proposal stands on its own merit. These criteria are listed in descending order of importance, and the non-price factors, when taken together, are significantly more important than price.

**Proposal Factor 1: Overall Scientific and Technical Merits of the Proposed Effort:** Will be evaluated for the degree to which the proposed effort improves Strategic Materials' supply chain sustainment.

**Proposal Factor 2: Potential Relevance and Contributions to the Area of Interest:** Will be evaluated based on the degree to which proposed studies and processes meet short and long term needs of the United States defense and essential civilian industrial base and provide a benefit to those industries.

**Proposal Factor 3: New and Creative Solutions, Technical Data and Computer Software:** Will be evaluated based on the degree to which new and creative solutions to technical issues important to the area of interest are proposed as well as the degree to which technical data or computer software developed under the proposed effort are to be delivered with unrestricted rights.

**Proposal Factor 4: Capabilities, Related Experience, Facilities, or Techniques:** Will be evaluated based on the degree to which the capabilities, related experience, techniques or unique combinations of these that are integral factors for achieving the proposed objective will successfully accomplish the area of interest.

**Proposal Factor 5: Qualifications, Capabilities and Experience:** Will be evaluated based on the degree the proposed principal researcher/scientist/engineer, team leader or other key personnel who are critical in achieving the proposed objectives will successfully accomplish the area of interest.

**Proposal Factor 6: Past Performance:** This assessment is based on the Offeror's performance on active and physically completed contracts supplying the same or similar research requirements either commercially or with the Government. Evaluations of past performance will consider the Offeror's ability to meet contract requirements and to provide timely delivery. In addition, the Government may review any other sources of information for evaluating past performance. Other sources may include, but are not limited to, past performance information retrieved through Past Performance Information Retrieval System (PPIRS). While the Government may elect to consider data from other sources, the burden of providing detailed, current, accurate and complete past performance information rests with the Offeror. In the case of an Offeror without a record of relevant past performance or for whom information on past performance is not available or so sparse that no meaningful past performance rating can be reasonably assigned, the Offeror may not be evaluated favorably or unfavorably on past performance. Therefore, the Offeror shall be determined to have unknown In the context of acceptability/unacceptability, "unknown" shall be past performance. considered "acceptable."

**Proposal Factor 7: Price:** Will be evaluated based on the overall realism and reasonableness of the proposal and availability of funds.

NOTE: Proposals submitted in response to this BAA shall be evaluated through a peer or scientific review process, as they are received. The Contracting Officer has discretion to request proposals after the closing date if the white paper was received prior to the closing date. Proposals lacking technical merit or relevance to DLA Strategic Materials' needs, or those proposals that may fall in areas wherein funds are not expected to be available, may be rejected without further action. Proposals stand on their own merit and will not be evaluated against other proposals.

## **12. EVALUATION RATINGS**

The evaluation team will classify proposals into one of the following categories:

**Category I:** Proposal is well conceived, scientifically and technically sound, pertinent to the program goals and objectives, and offered by a responsible contractor with the competent scientific and technical staff and supporting resources needed to ensure satisfactory program results. Proposals in Category I are recommended for acceptance (subject to availability of funds) and normally are displaced only by other Category I proposals.

**<u>Category II</u>**: Proposal is scientifically or technically sound, requiring further development and is recommended for acceptance, but at a lower priority than Category I.

**<u>Category III</u>**: Proposal is not technically sound or does not meet agency needs.

## **13. OTHER PERTINENT INFORMATION**

- (1) **Responsibility Determination:** To be eligible for award of a contract, all prospective Offerors must meet certain minimum standards pertaining to financial resources, ability to comply with performance schedules, have a satisfactory performance record, integrity, organizational structure, experience, accounting and operational controls, technical skills, facilities and equipment and be otherwise qualified. For additional information concerning standards of responsibility for prospective contractors, please refer to FAR Subpart 9.1.
- (2) **System for Award Management (SAM):** Successful Offerors not already registered in SAM will be required to register prior to award of any contract. Information on SAM registration is available at https://www.sam.gov/portal/public/SAM.
- (3) **Representations and Certifications:** The Offeror shall complete and submit Representations and Certifications via SAM at <u>https://www.sam.gov/portal/public/SAM</u>.

## **Exhibit A: NDS Strategic and Critical Materials List**

Aluminum Oxide, Fused Crude
Aluminum-Lithium Alloys
Antimony
Beryl Ore
Beryllium Metal
Beryllium-Copper Master Alloy (BCMA)
Bismuth
Boron
Cerium
Chromium Metal
Cobalt
Dysprosium
Erbium
Europium
Ferrochrome
Ferromanganese
Fluorspar, Acid Grade
Fluorspar, Metallurgical Grade
Gadolinium
Gallium
Germanium
Graphite
Holmium
Indium
Iridium
Lanthanum
Lead
Lithium
Lutetium
Magnesium
Manganese Metal, Electrolytic
Manganese Ore, Chemical and Metallurgical
Grade
Neodymium
Nickel
Niobium (Columbium)
Palladium

Platinum
Praseodymium
Quartz Crystal, Synthetic
Rhenium
Samarium
Scandium
Silicon Carbide
Strontium
Tantalum
Tellurium

## EXHIBIT B: SAMPLE FORMAT OF STATEMENT OF WORK

The following is offered as the format for the SOW.

(1) 1.0 - Objective: This section is intended to give a brief overview of the specialty area and should describe why it is being pursued, and what you are trying to accomplish.

(2) 2.0 - Scope: This section includes a statement of what the SOW covers. This should include the technology area to be investigated, objectives/goals, and major milestones for the effort.

(3) 3.0 - Background: The offeror shall identify appropriate documents that are applicable to the effort to be performed. This section includes any information, explanations, or constraints that are necessary in order to understand the requirements. It may include relationship to previous, current and future operations. It may also include techniques previously tried and found ineffective.

(4) 4.0 - Technical Requirements:

(a) This section contains the detailed description of tasks, which represent the work to be performed which are contractually binding. Thus, this portion of SOW should be developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the overall program goals. The work effort should be segregated into major tasks and identified in separately numbered paragraphs according to the decimal system above. Each numbered major task should delineate, by subtask, the work to be performed. The SOW must contain every task to be accomplished.

(b) The tasks must be definite, realistic, and clearly stated. Use "shall" whenever the work statement expresses a provision that is binding. Use "should" or "may" whenever it is necessary to express a declaration of purpose. Use "will" in cases where no Offeror requirement is involved; e.g., power will be supplied by the Government. Use active voice in describing work to be performed.

(c) Do not use acronyms or abbreviations without spelling-out acronyms and abbreviations at the first use; place the abbreviation in parenthesis immediately following a spelledout phrase. This provides the definition for each subsequent reuse. As an option, a glossary may contain definitions of acronyms and abbreviations.

(d) If presentations/meetings are identified in your schedule, include the following paragraph in your SOW:

"Conduct presentations/meetings at times and places specified in the contract schedule."

## EXHIBIT C: SAMPLE STATEMENT OF WORK

### 1.0 OBJECTIVE:

1.1 The objective of this effort is to investigate: (a) techniques for generating code for High Performance Computers (HPCs); (b) technology that connects transformed variants of programs, crucial to debugging and performance analysis; and (c) exploitation of HPCs by software environments.

#### 2.0 SCOPE:

2.1 The scope of this effort is to develop technology for building integrated computational environments for high performance systems and distributing a set of advanced computational software tools based on this technology that demonstrates the ability to achieve improved performance on current HPC computers.

#### 3.0 BACKGROUND:

3.1 High performance computing and computer communications networks are increasingly important to scientific advancement, economic computation, and national security. The technology is reaching the point of having a transforming effect on our society, industries, national defense, and educational institutions. The goal of the High Performance Computer and Communication (HPCC) program is to accelerate significantly the commercial availability and utilization of the next generation of high performance computers and software.

3.1 The key is by aggressively pursuing research in parallel compilers, object parallel computing, and intelligent performance optimization to deliver revolutionary advances in computational software tools. An ideal computational software environment will ultimately depend on a pervasive understanding of the relationship between parallel programming methodology, parallel compiler transformations, parallel object implementation, and system performance characteristics.

## 4.0 TASKS/TECHNICAL REQUIREMENTS:

4.1 The contractor shall accomplish the following:

4.1.1 Design and implement a Code Generator (CG) for a high performance computer. The CG shall include the design of initial data structures.

4.1.2 Develop an execution analysis infrastructure to debug and study the performance of compiled programs without having to understand the transformations caused upon the program by the compiler, which includes:

4.1.2.1 Implementation of connections between existing front-ends and intermediate representation.

4.1.2.2 Implementation of connections from serial profile data to intermediate representation.

4.1.3 Develop technology to utilize the power of HPC on the computational tasks to develop a general HPC design environment, which includes:

4.1.3.1 Tools for serial machines to be automatically scheduled on nodes of an HPC;

4.1.3.2 Interfaces for automatic scheduling of tools that are specifically designed to be executed on HPCs; and

4.1.3.3 Integrating the CG from paragraph 4.1.1.

4.1.4 Identify HPC community members with relevant applications to experiment with the ALPHA version of the CG from paragraph 4.1.1 and the general HPC design environment from paragraph 4.1.3.

4.1.5 Reporting.

4.1.5.1 Continually determine the status of the effort and report progress toward accomplishment of contract requirements. (See CDRL, A001)\*

4.1.5.2 Continually determine the status of funding required for contract performance. (See CDRL, A002)\*\*

4.1.5.3 Document all technical work accomplished and information gained during the performance of this acquisition. This shall include all pertinent observations, nature of problems, positive as well as negative results, and design criteria established, where applicable; also, procedures followed, processes developed, "Lesson Learned", etc. The details of all technical work shall be documented to permit full understanding of the techniques and procedures used in evolving technology or processes developed. Separate design, engineering, or process specifications delivered during this acquisition shall be cross-referenced to permit a full understanding of the total acquisition. (See CDRL, A003)\*

### **EXHIBIT D: PAST PERFORMANCE REFERENCES**

Please identify three companies/Government agencies that you have worked with in the prior three years. DLA Strategic Materials will contact these companies/agencies to obtain a reference for your company.

1. PROJECT 1:
a. Work Performed:
b. Name of Company/Agency:
c. Dollar Value:
d. Point of Contact:
e. Telephone Number:
f. E-Mail Address:
1. L-Man Address.
2. PROJECT 2:
a. Work Performed:
b. Name of Company/Agency:
c. Dollar Value:
d. Point of Contact:
e. Telephone Number:
t. E-Mail Address:

# 

## **END OF BAA**