[redacted]

SPRDL1-24-R-0161 (JA-00926)
Previous J&A: SPRDL1-14-R-0070

JUSTIFICATION AND APPROVAL FOR OTHER THAN FULL AND OPEN COMPETITION SPRDL1-24-R-0161

1. **Contracting Agency:** Defense Logistics Agency - Land Warren (DLA-WRN).

2. **Description of Action:** DLA-WRN proposes to award a new Firm-Fixed-Price contract to an offeror providing the product of General Dynamics Mission Systems-Canada (GDMS-C), Commercial and Government Entity (CAGE) 05257, the approved source for National Stock number (NSN) 6110-01-514-7369, Nomenclature Redesigned Hull Networks Box (RHNB) with Container, Part Number 57K4140 using Army Working Capital Funds.

3. Description of Supplies/Services: The RHNB with Container is used on the Abrams Tank to distribute power, control, and status signals among the Hull's engine and transmission control equipment, the driver's panels, lights, and personnel environmental controls. The deliverable for this contract is a base quantity of 25 units each, with 100% option for a total quantity of 50 units each. The total estimated maximum value of this contract is $[redacted]

Acquisition Method Code (AMC):
3 - Acquire, for the second or subsequent time, directly from the actual manufacturer.

Acquisition Method Suffix Code (AMSC):
B - Acquisition of this part is restricted to source(s) specified on "Source Control", "Altered Item" or "Selected Item" drawings/documents.

4. Authority Cited: The statutory authority permitting other than full and open competition for this effort is 10 United States Code (U.S.C.) 3204(a)(1) as implemented by the Federal Acquisition Regulation (FAR) 6.302-1, Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements.

5. Reason for Authority Cited: The RHNB with Container, used on various models of the M1 Family of Vehicles (FOV), consists of the RHNB Line Replaceable Unit (LRU) encased in a hard-shell container. The container protects the RNHB LRU during shipping, handling, and storage to depots and the field.

The RHNB LRU distributes power, control, and status signals among the hull's engine/transmission control equipment, driver's panel, lights, and personnel environmental controls. It is an environmentally sealed unit which houses control, interface, and power distribution circuits as well as circuit breakers for equipment located in the hull of the M1A1 FOV. The assembly contains embedded diagnostics modules and diagnostic test connectors for monitoring interface signals to quickly isolate faults to the box level.

This part must be acquired from a manufacturing source(s) specified on a source control or selected item drawing as defined by the current version of American Society of Mechanical Engineers (ASME) Y14.100. Suitable technical

[redacted]

[redacted]

data, Government data rights, or manufacturing knowledge are not available to permit acquisition from other sources, nor qualification testing of another part, nor use of a second source part in the intended application. Although, by ASME Y14.100 definition, altered and selected items shall have an adequate Technical Data Package (TDP), data review discloses that required data or data rights are not in Government possession and cannot be economically obtained.

GDMS-C is the custodian of this TDP and the Original Equipment Manufacturer. While the TDP is United States Government (USG) owned (developed exclusively with USG funds), GDMS-C is the only contractor that has demonstrated that they have the tooling and equipment needed to manufacture this part. Additionally, the TDP is not fully defined because the drawings do not give enough information to design the item and are inadequate for production without access to GDMS-C design and procedures. GDMS-C acquires the Container (a supplier item that will also need to be to be approved and qualified for use) and assembles it with the RHNB1-3 LRU to produce the final product. GDMS-C has developed, tested, passed all qualification testing and obtained Government approval to manufacture RHNB LRU which is used on M1A1US, M1A1 Australia, M1A1 Iraq, M1A1 Morocco, M1A1 Egypt, and the M1A2S Abrams Tank Platform.

NOTE: GDMS-C has informed the USG that the part being procured under the authority of the J&A is not compatible with M1A2 T and M1A2 KUW.

Only GDMS-C has the capability to manufacture, perform failure analysis, develop inspection and acceptance criteria for components, repair/rebuild and test the RHNB with Container that meet USG requirements. In addition, GDMS-C's RHNB with Container is required to comply with multiple specifications and pass extensive testing procedures outlined in Critical Item Product Fabrication Specification for the assembly. The end item, M1 Abrams Tank, must be utilized to perform various testing requirements for this component. In addition to the operations, functionality, compatibility, reliability, and interoperability tests, the part shall meet the circuit continuity, circuit isolation, Nuclear, Biological and Chemical (NBC) Protective Subsystem, Nuclear Event Detection, Environmental, Temperature, Humidity, Vibration, Basic Shock, Ballistic Shock, Submergence, Fungus and gun firing requirements to verify conformance as required by MIL-STD-810. Failure to meet all specified requirements will jeopardize the readiness of the entire RHNB with Container. Parts that are not properly qualified may cause an Operational Mission Failure necessitating a mission abort if this part fails during an operational event. For the reasons listed, no contractor other than GDMS – C has been authorized/approved to manufacture and sell the RHNB with Container to the USG.

To make this a competitive procurement, the USG would need to provide a complete TDP. A significant amount of time and money would be necessary to reverse engineer the item. The table below shows the activities required, along with their associated delay and costs for the development and release of a competitive TDP. The information provided in this section is only

an estimate based on engineering judgment and experience. Even if a reverse-engineering effort is successful, the USG will incur excessive costs and lead-time delay.

Paragraph	Task	Cost Estimate
a.	Reverse Engineer	$2,000,000
b.	Engineering Verification Testing/Analysis/Inspections	$3,000,000
c.	Logistical Development	$25,000
d.	Nuclear Hardness and Survivability Testing (NH&ST)	*$60,000
e.	Conduct System Level Testing	*$200,000
TOTALS		$5,285,000

[redacted]

*The Nuclear Hardness and Survivability Testing (NH&ST) and Conduct System Level Testing estimated cost and time are included in the Engineering Verification Testing/Analysis $3,000,000 and [redacted]

a) Reverse engineering (includes but not limited to the following): Identifying all the deficiencies; conducting market research on available parts and components; working in conjunction with General Dynamics Land and Systems (Abrams Tank system integrator); obtaining existing parts; tearing down and understanding the design; redesigning parts that are unavailable from approved sources; redesigning parts that may be obsolete at the time of the reverse engineering effort; creating a prototype and generating a new TDP. The new TDP would include components complete drawings, performance specifications, and qualification procedures. Thus, this effort could run as high as $2,000,000 and an estimated delay could take up to [redacted]

b) Engineering verification testing (includes but not limited to): Nuclear Event Detection, system response, false return rate, electrical protection, circuit isolation, signal isolation, activation time, circuit continuity, analysis (includes but not limited to reviewing the engineering data and preparing technical reports); NBC Protective Subsystem, Environmental, Temperature, Humidity, Vibration, Basic Shock, Ballistic Shock, Submergence, Fungus and gun firing requirements inspections (includes but not limited to Document control, Traceability, Lot Control, Manufacturing Process Control, Test Control, Calibration Control, Corrective Actions & Control or Non-conforming Material, Internal Audits, Records Control and Product Control) plus any costs for test facilities and extensive systems tests to ensure proper field operation of Pulse Jet Air Cleaner Assembly (P/N: 12388281) which is the end item for the RHNB with Container. This effort could run as high as $3,000,000 and an estimated delay could take up to [redacted]

c) Logistical Development (includes but not limited) to updating: Technical Bulletins, provision part (assigning NSN), developing new technical manuals for the new configuration RHNB 1-3 LRU will cost at least $25,000 and could take up to [redacted]

d) The RHNB 1-3 LRU is a Nuclear Hardness Critical item which means NH&ST is required. NH&ST includes nuclear testing, physical testing in a simulated environment, modeling, simulation, and analysis. The NH&ST, as well as the Nuclear Survivability Assessment (electronic microcircuit test phase, system analysis test phase, and system level test phase), would be conducted at the U.S. Army Test and Evaluation Command through White Sands Missile Range for nuclear hardness compatibility and survivability. The estimated cost to conduct NH&ST could run as high as $60,000 and could take at least [redacted] to complete.

e) Conduct System Level Testing: Weapon system level testing will need to be performed at a USG testing facility, such as Aberdeen Proving Ground, to ensure the entire system works properly and safely. The System level testing includes but not limited to shipping component assemblies to the appropriate military test facility, acquiring a weapon system to perform the testing, connecting the RHNB 1-3 LRU to the Pulse Jet Air Cleaner Assembly installing the Pulse Jet Air Cleaner Assembly to the Pulse Jet Air Cleaner Installation, install the Pulse Jet Air Cleaner Installation on the Chassis Assembly and execution of testing. In addition, a test result report would be required. Thus, this effort could run as high as $200,000 and an estimated delay could take up to [redacted]

The aggregate cost of reverse engineering, the RHNB 1-3 LRU could run as high as $5,025,000 which would not be recovered through subsequent competition.

At the current usage rate of [redacted] units per year, for the RHNB with Container, at the current procurement cost of [redacted] per unit, and assuming the 25% saving achieved through competition, the $[redacted] annual savings would take [redacted] years to offset the estimated $5,025,000 cost of reverse engineering the RHNB with Container (conducting engineering verification testing/analysis/inspections, logistical development, NH&ST & conduct system level testing).

The aggregate delay in the acquisition process for reverse engineering is at leas[redacted] Thus, a delay of this scale is unacceptable in fulfilling the Army's requirements and would have a significant detrimental impact on its ability to support the Soldier [redacted]

6. Efforts to Obtain Competition:

a. Effective competition: Due to the reasons cited in Section 5 above, the Government is not pursuing competition for this item.

b. Subcontracting competition: Unless the contract is awarded to a small business, the solicitation and resulting contract will include FAR clauses 52.219-8, "Utilization of Small Business Concerns"; 52.244-5, "Competition in Subcontracting"; 52.219-16, "Liquidated Damages--Subcontracting Plan";" and Defense Federal Acquisition Regulation Supplement 252.219-7003, "Small Business Subcontracting Plan (DoD Contracts)," to maximize small business opportunities and utilization.

7. Actions to Increase Competition: There are no plans to increase competition for future procurements due to the reasons cited above.

8. Market Research: A Source Sought Notice was published on SAM.gov on 24 September 2024 with responses due on 25 October 2024. No responses were received.

In December 2024 the U.S. Army Combat Capabilities Development (DEVCOM) Armaments Center (AC) Project Engineer conducted a computer-based online search using google.com of known suppliers looking for published material on a new built military grade RHNB with Container.

Keyword(s): “Redesigned Hull Networks Box with Container, Abrams Tank”.

Findings:
The results of this search did not produce any new companies that would provide a direct replacement military grade RHNB with Container that is 100% new and not rebuilt that could be installed in the Pulse Jet Air Cleaner Assembly. GDMS-C is listed as the original source for part RHNB with Container. DEVCOM AC Engineer contacted GDMS-C and spoke with a Project Manager that confirmed, GDMS-C still produces the RHNB with Container.

Summary: As a result of Market Research, it was concluded that the Government does not have enough detailed information to investigate similar parts for this specific application. This military grade RHNB with Container cannot be identified as a Commercial Off the Shelf Item.

9. Interested Sources: To date no additional sources have expressed interest in this item.

10. Other Facts: Procurement History:

1. Contract Number: SPRDL1-15-D-0022/0004/0001AA
Award Date: 13 January 2016
Contractor: Canadian Commercial Corporation
Contract Value: $ 2,952,777
Competitive Status: FAR 6.302-1 Only one responsible source

2. Contract: W52H09-05-D-0250/BR16/0001AA
Award Date: 17 March 2008
Contractor: Canadian Commercial Corporation
Value: $ 750,996
Competitive Status: FAR 6.302-1, Only one Responsible source

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

Name: [redacted]
Title: Chief, Mobile Direct Fires Branch
Email: [redacted]
Signature:

4/16/2025

X [redacted]

[redacted]

12. Requirement Certification: I certify that the supporting data under my cognizance which is included in the justification is accurate and complete to the best of my knowledge and belief.

Name: [redacted]
Title: Division Chief – Sourcing Division
Email: [redacted]
Signature:

4/16/2025

X [redacted]

[redacted]

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. This determination will be based on the results of a detailed cost and/or price analysis. The contractor will be required to submit certified cost or pricing data as this item has been determined to be an "other than commercial" product over the threshold.

Name: Ralph McCarthy
Title: Contracting Officer
Email: ralph.mccarthy@dla.mil
Signature:

4/17/2025

X Ralph McCarthy

Signed by: MCCARTHY.RALPH.FITZGERALD.1022173541

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

Name: McCarthy, Ralph F CIV DLA LAND AND MARITIME (USA)
Title: Contracting Officer
Signature:

4/17/2025

X Ralph McCarthy

Signed by: MCCARTHY.RALPH.FITZGERALD.1022173541

[redacted]

SPRDL1-24-R-0161 (JA-00926)
Previous J&A: SPRDL1-14-R-0070

Approval Authority for Acquisitions Greater Than $750,000 But Less Than $15M

APPROVAL OF JUSTIFICATION
FOR OTHER THAN FULL AND OPEN COMPETITION

Based on the foregoing justification, I hereby approve the procurement of the following:

a. Noun: RHNB with Container

b. NSN: 6110-01-514-7369

c. Part Number: 57K4140

d. Base Quantity: 25 each (100% option)

e. Total Quantity: 50 each

f. Total Estimated Contract Value: [redacted]

This action will be awarded under other than full and open competition pursuant to the authority of 10 U.S.C. 3204(a)(1) and subject to the availability of funds. This approval is subject to the proviso that the property herein described has otherwise been authorized for acquisition.

WIEBUSCH.JAMIE.1251897324 Digitally signed by WIEBUSCH.JAMIE.1251897324 Date: 2025.05.08 14:17:18 -04'00'

COMPETITION ADVOCATE

[redacted]