

**STATEMENT OF WORK (SOW) PERFORMANCE ORIENTED PACKAGING (POP)  
BOXES FOR MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) M26 WARHEADS,  
GUIDED MULTIPLE LAUNCH ROCKET SYSTEMS (GMLRS) AND LOW COST  
REDUCED RANGE PRACTICE ROCKETS (LCRRPR) PRODUCTION**

**1.0 SCOPE**

This Statement of Work (SOW) defines the work to be performed by the contractor, as authorized by and subject to the terms and conditions of the contract to manufacture Performance Oriented Packaging (POP) Boxes utilized to store/ship Multiple Launch Rocket Systems (MLRS) M26 warheads, motors, and residual components (i.e., fin restraints, igniters, and fuses) in support of GMLRS and LCRRPR production activities.

**2.0 APPLICABLE DOCUMENTS**

The applicable top-level documents are contained in contract Attachment 0002, Document Summary List (DSL) by number, title, date, contract reference and category. The document versions specified on the DSL take precedence over the generic references (those without the revision letters) cited in the SOW. Unless otherwise indicated, copies of specifications, standards, and handbooks listed are available from the Defense Logistics Agency (DLA) Document Services, at the Acquisition Streamlining and Standardization Information System (ASSIST) website: <https://quicksearch.dla.mil/qsSearch.aspx>.

**3.0 REQUIREMENTS**

The contractor shall provide the materials, labor, and management to manufacture POP Boxes in accordance with (IAW) POP Box Drawing 13640074 Attachment 0003, and POP Box Drawing 13081109, Attachment 0004.

**3.1 PRODUCTION LINE VALIDATION**

The contractor shall utilize existing manufacturing processes or establish a production line or processes for the fabrication of First Article Units and POP Box production. Within 60 days after contract award, the contractor shall conduct a Production Line Validation (PLV) at the contractor's facility to verify

and demonstrate manufacturing processes, tooling, work instruction, test shall correct any manufacturing issues identified during the PLV in order to reduce manufacturing risks during production. The contractor shall notify the Strategic and Operational Rockets and Missiles (STORM) Project Office 21 business day prior to the PLV to allow for coordination time for onsite Government participation and to witness at least 1 of the first article units, for each POP Box configuration that will be used for POP Box certification. Upon successful completion of the PLV, the Government will provide the contractor with a validated PLV certificate. If the PLV is not successful, the contractor shall modify and perform a Delta PLV within 30 days, at the expense of the contractor.

The contractor shall notify the Government of any proposed changes or modification to components, processes or the production line for evaluation, approval and to determine the need for a delta PLV and delta FAI. A break or lapse in production of more than 1 year or relocation of a validated production line shall require a full PLV and FAI. Planning and commencement of the PLV and FAI shall be conducted prior to receipt and acceptance of hardware.

### **3.2 MANUFACTURING PLANNING DOCUMENTATION**

The contractor shall develop, implement, and maintain manufacturing planning documentation as baseline documentation for production. Documentation shall be made available for Government review onsite during the PLV upon request. The manufacturing planning documentation shall include detailed assembly drawings, bill-of-materials, detailed parts list, tooling plans, operation process charts, production flow, work instruction, standard operating procedures, and operator instructions.

### **3.3 QUALITY PROGRAM PLAN**

The contractor shall establish a quality management system that is in compliance or equivalent of International Organization for Standardization (ISO) 9001/AS9100, although ISO9001/AS9100 certification is not mandatory. The contractor shall prepare and deliver a Quality Program Plan (QPP) IAW DI-QCIC-81722 (CDRL A004).

### **3.4 FIRST ARTICLES**

The contractor shall produce 11 first article units for each POP Box configuration and conduct a First Article Inspection (FAI) with a Government representative witness at the contractor's facility, on 1 of the 11 first article units 60 days after contract award to verify that the manufacturing and inspection processes are adequate to produce both POP Boxes that are compliant with Attachment 0003 POP Box Drawing 13640074, and Attachment 0004 POP Box Drawing 13081109. The contractor shall notify the Government 14 days prior to the FAI to allow for coordination time.

The Government's witness will determine approval/disapproval of the FAI. Approval of the FAI is required prior to submitting 11 first article units for each POP Box Certification Testing. All 11 first article units must receive successful POP Box Certification. If the FAI is disapproved, the contractor shall repeat the FAI no later than 30 days from disapproval. The contractor shall make any necessary modification or repairs to the rejected first article and perform a new FAI which will be entirely at the contractor's expense.

### **3.5 TEST PLAN**

The contractor shall prepare and deliver a POP Box Qualification Test Plan for each configuration IAW DI-NDTI-80566 (CDRL A001). The contractor shall provide controls of material, process, and product characteristics used to validate conformance to item requirements.

### **3.6 CERTIFICATION TESTING**

The contractor shall obtain and maintain MLRS M26 POP Box Certifications for the shipping containers, to ensure the boxes can be safely utilized for storage/shipment of MLRS M26 warheads, motors, and residual components which include igniters, fin restraints, and fuses. The contractor shall perform POP Box Certification testing on the 11 first article units for each POP Box configuration IAW Title 49 Code of Federal Regulations (CFR), Sub-part M, Testing of Non-Bulk Packaging and Packages, Section 178.601; and the American Society for Testing and Materials (ASTM) D4919, Testing of Hazardous Materials Packaging. Specific tests shall include 11 boxes as follows: 178.603 Drop (5 test articles); 178.606 Stacking (3 test articles), and 178.608 Vibration (3 test articles).

The contractor shall use the mass simulants provided as Government Furnished Property (GFP) by the USG and it shall only be used for the purpose of this contract and no other.

The contractor shall utilize an independent test facility to conduct certification testing, and the test facility shall submit reports of its findings to the contractor, who will then submit the Certification Test Report IAW DI-PACK-81059 (CDRL A003). If the POP Box Certifications fail any tests, the contractor shall notify the Contracting Officer within 48 hours of failing the test. The contractor shall have 15 days to repeat the testing. The contractor shall make any necessary modifications and/or take corrective actions for successful POP Box Certification. Changes may be cause for a delta FAI and delta PLV, which will be entirely at the contractor's expense.

The contractor shall dispose of the 11 test units produced for each configuration at the contractor's expense. The 11 test units shall not be used as deliverables for the contract production quantities. The contractor shall submit a certified statement via a formal contracts letter to the Contracting Officer as evidence of disposal. The letter must be transmitted via electronic mail (email).

POP Box Certification for each configuration requires recertification every 24 months, which shall be maintained through the performance of the contract.

### **3.7 CERTIFICATION TEST REPORT**

The contractor shall prepare and deliver POP Box Certification Test Reports for each POP Box configuration IAW DI-PACK-81059 (CDRL A003) detailing the results of the POP certification testing. The contractor shall not commence production until Acceptance/Approval is received for the POP Box Certification Test Reports.

The Government will separately store/ship the following items listed below in the POP Boxes delivered IAW Drawing 13640074 under this contract. The contractor shall provide packaging instructions/drawings for each of these items in the POP Box Certification Test Report (CDRL A003). The gross container weight (to include the weight of the outer POP Box container, inner packaging, cushioning material/dunnage, partitions, packaging components, and the items being stored) shall not exceed 451 pounds (lbs)/205 kilograms (kg).

- 1) Warhead, Rocket (Part Number 13029540; Department of Transportation (DOT) Hazard Class/Division and Compatibility Group: 1.1D; UN Number:0286, DOT Explosive Number (EX) Reference Number:

EX1984070166; Proper Shipping Name: Warheads, Rocket; Net Explosive Weight (NEW) 20.381025 kg/44.932468 lbs; Item Weight: 335 lbs./151.95 kg; Item Dimensions: 82" x 9" x 9".) The number of warheads per exterior container shall not exceed 1 each.

2) Rocket Motor (Part Number 13026895; DOT Hazard Class/Division and Compatibility Group: 1.3C; UN Number: 0186, DOT EX Reference Number: EX1984070165; Proper Shipping Name: Rocket Motors; Net Explosive Weight (NEW) 98.835000 kg/217.893875 lbs; Item Weight: 333 lbs./151.05 kg; Item Dimensions: 88" x 9" x 9".) The number of rocket motors per exterior container shall not exceed 1 each.

3) Restraint Assembly, Fin-Tactical (Part Number 13026450, DOT Hazard Class/Division and Compatibility Group: 1.4S; UN Number 0173; NEW 0.001430 kg/0.003153 lbs; Proper Shipping Name: Release Devices, Explosive; Item Weight: <.10 lb/.04 kg; Item Dimensions: 4.3" x 2.5" x 1.0".) Parts are enclosed in a commercial zip lock closure bag. The number of parts per exterior container may vary, up to 1000 parts; and shall not exceed the gross container weight.

4) Fuse, Electronic Time-M445 (Part Number 11737580, DOT Hazard Class/Division and Compatibility Group: 1.4B, UN Number 0257; NEW 0.00088 kg/0.00194 lbs; Proper Shipping Name: Fuses, Detonating; Item Weight: 2.1 lbs/.95 kg; Item Dimensions: 6.0" x 3.5" x 3.5".) The number of fuses per exterior container may vary up to 66 parts; and shall not exceed the gross container weight.

5) Igniter Assembly (Part Number 13026949, DOT Hazard Class/Division and Compatibility Group: 1.3G, UN Number: 0315; NEW 0.031 kg/ 0.068 lbs; Proper Shipping Name: Igniters; Item Weight: .3 lbs/.136 kg; Item Dimensions: 3.9" x 1.6" x 1.6".) The Government will store each individual part in an antistatic bag with zip lock closure. The number of parts per exterior container may vary up to 300 parts; and shall not exceed the gross container weight.

The Government will separately store/ship the following item listed below in the POP Boxes delivered IAW Drawing 13081109 under this contract. The contractor shall provide packaging instructions/drawings for these items in the POP Box Certification Test Report (CDRL A003). The gross container weight (to include the weight of the outer POP box/container, inner packaging, cushioning material/dunnage, partitions,

packaging components, and the items being stored) shall not exceed 69.5 lbs)/31.525 (kg).

1) Igniter Assembly (Part Number 13026949/13026949-1, DOT Hazard Class/Division and Compatibility Group: 1.3G, UN Number: 0315; NEW 0.031 kg/0.068 lbs; Proper Shipping Name: Igniters; Item Weight: .3 lbs/.136 kg; Item Dimensions: 3.9" x 1.6" x 1.6".) The Government will store an Igniter in each cell, until all 3 layers are complete. The exterior container shall contain 108 igniters.

### **3.8 MARKINGS**

The contractor shall apply POP Certification markings to all delivered containers IAW Title 49 CFR, MIL-STD-129, and MIL-STD-130. The contractor shall prepare the POP Boxes for shipment as directed in Section D of the contract, Packaging and Marking.

### **3.9 CONFIGURATION AND DATA MANAGEMENT**

When a variance from the design established by the Attachment 0003 POP Box Drawing 13640074, or Attachment 0004 POP Box Drawing 13081109 is required, the contractor shall prepare and deliver a Request for Variance (RFV) against drawing number 13640074 or 13081109, IAW DI-SESS-80640 (CDRL A002).