

**STATEMENT OF WORK
FOR
Manufacture of Machined Hardware Components
Anti-Structural Munitions Hand Grenade**

1.0 INTRODUCTION

This Statement of Work (SOW) defines the requirements, responsibilities, deliverables, and delivery dates for the manufacture of machined hardware components for the Anti-Structural Munitions (ASM) Hand Grenade (HG).

1.1 Background

The evolution of armed forces tactics, especially for small units, has generated urgent needs for new types of weapons to prosecute small arms conflicts and terrorist threats in urban and remote confined spaces. As a result, the Naval Surface Warfare Center, Indian Head (NSWC/IH) was directed and funded to adapt emerging explosives technology for anti-structural munitions into a hand throw device that could be safely employed in the environments mentioned above. NSWC/IH is responsible for production, environmental / performance testing, and configuration management of the ASM Hand Grenade. NSWC/IH has produced ASM Hand Grenades, in support of the United States Special Operations Command (USSOCOM), since 2003.

The ASM Hand Grenade is an enhanced blast grenade developed to support U.S. Special Operations Forces in support of the Global War on Terror. The device is initiated using a standard M213 Hand Grenade Fuze, which initiates a PBXW-128 booster. The booster then initiates the main charge of PBXN-109. The grenade case material is an anodized aluminum alloy. The grenade with fuze is approximately 5.3 inches in height and 2.5 inches in diameter and weighs just over 1 pound.

1.2 Scope

This Statement of Work (SOW) defines the requirements, responsibilities, and deliverables for manufacture of machined ASM Hand Grenade hardware components. These deliverables are required to support production orders received from USSOCOM

The Contractor shall fabricate, test, inspect and deliver machined hardware components in accordance with the requirements of this SOW.

2.0 APPLICABLE DOCUMENTS

The following NSWC IHDIV technical drawings form a part of this SOW to the extent specified herein.

ASM Hand Grenade MOD 0

Document Number	Document Title
430-174-0005 REV B	Adapter

430-174-0006 REV B	Body
430-174-0007 REV B	Base Cap
430-174-00013 REV C	Body and Cap Assembly

2.1 General Specifications & Standards

The following is a list of general specifications & standards for manufacture of the ASM Hand Grenade machined metal hardware components:

Document Number	Document Title
MIL-STD-1916	DOD Preferred Methods for Acceptance of Product
ISO 9001:2008	Quality System
ASQC-8402	Quality Assurance Terms & Definitions
ISO 10012-1	Quality Assurance Requirements for Measuring Equipment
ANSI/NCSL Z540-1	Calibration Systems Requirements
MIL-HDBK-61A	Configuration Management Guidance

- * Copies of Government documents are available online at <http://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.

2.2 Data Item Descriptions

Unless otherwise specified, the following documents of the issue listed form a part of this SOW and are to be used for general guidance only.

DI-CMAN-80640C	Request for Deviation (RFD)
DI-MISC-81356	Certificate of Compliance

Application for copies of these documents should be addressed to the Superintendent of Documents, Government Printing Office, Washington, DC, 20420.

2.3 Conflicting Document Requirements

If there are any conflicts noted between the aforementioned publications, drawings or inspection requirements listed herein, the Contractor shall notify the Government Technical Points of Contact (TPOC's), as identified in section 4.1 of this SOW, in writing for interpretation, clarification, and resolution. In general, the Technical Drawings listed in this SOW will take precedence over any conflicts in documentation.

3.0 REQUIREMENTS

The Government requires manufacture of ASM HG hardware components in accordance with the documents specified above. After receipt of a Purchase Order, the Contractor shall produce an initial minimum quantity of 16,500 each. The hardware components produced shall meet all form, fit, and dimensional requirements per the technical

drawings. The Government will also include contractual options which may be exercised for additional quantities, if required.

The Contractor shall fabricate, inspect, pressure test (“Pass”/“Fail”), and deliver the hardware components in accordance with technical drawings identified in Section 2.0, Applicable Documents and in accordance with the contents of this SOW.

The Contractor shall provide, design and/or fabricate all necessary tooling to manufacture, test and dimensionally inspect the units, and provide data as detailed herein. Other documentation and support shall be provided as requested by the Government.

3.1 Fabrication and Test

3.1.1 Manufacturing Processes

The Contractor shall maintain and control manufacturing processes to fabricate, inspect, test, and deliver ASM Hand Grenade hardware components as described in this SOW. The processes should cover all phases from the ordering of raw materials to Government acceptance of the finished product. All hardware components shall be manufactured in accordance with the drawings and specifications referenced in this SOW. Once the First Article of an item is accepted, the Contractor shall not change sub-contractors without prior approval from the Government. The Government also has the right to waive the first article requirement if deemed appropriate; for example, if the contract is awarded to an experienced Contractor having produced ASM Hand Grenade hardware components previously.

3.1.2 Manufacturing Certifications

The Contractor shall submit a Certificate of Compliance certifying that the ASM Hand Grenade hardware components have been dimensionally inspected and meet the requirements of this SOW (Sections 3.2.2 & 3.2.2.1) and the product documentation.

The Contractor shall deliver all components as assembled units.

Additionally, the Contractor shall also submit a Certificate of Analysis certifying that each ASM Hand Grenade assembled component has been pressure tested and meets the requirements of this SOW (Section 3.2.2.1) and the product documentation.

3.1.3 Manufacturing Traceability

The Contractor shall provide inspection and test results associated with certifying the units. This documentation shall be provided with each delivery to the Government. The Contractor shall also provide certifications for the raw materials and/or sub-vendor processes used in each production unit lot.

3.2 Quality Control

3.2.1 Quality System and Quality Control Processes

The Contractor shall maintain a quality system, associated certification(s) or compliances, and test/inspection results. The Contractor shall maintain quality and process controls that will be used to ensure that the production unit will be in compliance with the applicable drawings, specifications, and this statement of work. The Contractor shall maintain documentation and processes that will be used to identify, record, and disposition non-conforming material, in-process rejects/reworks and characteristic discrepancies. This documentation shall be kept by the Contractor until further notified by the Government.

3.2.2 Inspection of Product

The Contractor shall utilize best engineering practices and develop procedures to ensure that the each component and the end item meet the requirements identified in the technical drawings and specifications. The Contractor is responsible for the performance of in-house inspections to ensure each lot of hardware components are in conformance with the Product Documentation; Section 2.2 of this SOW. Final acceptance will be determined by the Government at Government destination. Acceptance of each delivery / lot of hardware will only occur after all requirements specified with the Product Documentation have been completed and passed.

3.2.2.1 Conformance Inspection Requirements

Conformance inspection shall consist of the Contractor's inspection(s) / tests(s).

The Contractor is responsible for creating an inspection / test plan, which shall be submitted to the Government for approval before manufacturing begins. The Government reserves the right to witness any or all of the inspections/testing. The Government may perform additional conformance inspections/tests outside of the Contractor's inspection / test plan at the Government's discretion and cost.

The Contractor shall ensure all components meet the requirements of the NSWC/ IH technical drawings provided. Throughout the entire manufacturing process, the Contractor shall consistently perform dimensional verification checks of the hardware components, ensuring each item produced meets form, fit, and dimensional requirements. A 100% dimensional verification shall be performed on a minimum of every 10th part. Additionally, the Contractor shall perform pressure testing (PASS/FAIL) on every end item (Body / Cap Assembly), per the technical drawing requirement.

3.2.2.2 First Article Acceptance Requirements

First Article inspection shall consist of the Government's inspection(s) / test(s). It shall be performed by the Contractor after contract award and prior to production. The First Article sample of units shall be produced with equipment and procedures the Contractor shall use in production. The First Article sample will be Twenty (20) complete

deliverables. First Article samples procured under this contract shall be considered to be test units and therefore should not be included in net deliverable quantities.

First Article approval is valid only on the contract under which it is granted, unless otherwise provided by the Contracting Officer for this contract. In the event that production has been interrupted for more than 12 months, and at the fault of the Contractor, there have been major changes in equipment, personnel, procedures, or other changes which, in the opinion of the Government; as relayed by the Contracting Officer, may adversely affect the product, additional First Article samples may be required prior to the resumption of production. The additional cost for such samples will be paid for by the Contractor. If such delays occur as a result of Government changes or cause, the additional cost for such samples will be borne by the Government.

The Government reserves the right to require an additional sample test at the cost of the Contractor, or cost compensation by the Contractor for additional Government testing if any deliverable fails to meet any requirement specified herein or in the product documentation. Any production by the Contractor before formal acceptance of the First Article sample shall be at the Contractor's cost risk.

Note: The Government has the right to waive the first article requirement if deemed appropriate. For example, the Government may choose to waive the first article requirement if contract award is given to an experienced Contractor having produced ASM Hand Grenade hardware components previously.

3.2.2.3 Government Acceptance of Delivery / Production Lots

Delivery / Production lot acceptance will consist of the Government's inspection(s) and / or test(s). For each delivery, the Government will randomly select a sample size from each delivery / production lot. If any item of the sample fails to comply with requirements, the Government will reject the sample and notify the Contractor to determine corrective action(s) by the Contractor.

3.2.2.4 Government Inspection of Facilities

The Government technical point of contacts, or other authorized Government representatives, may visit/inspect the plant or plants of the Contractor, or of any subcontractors, engaged in the performance of this contract.

If any examination/test is made by the Government on the premises of the Contractor/ subcontractor, the Contractor and any subcontractors shall provide all reasonable facilities and assistance for the safety and convenience of the Government inspectors in the performance of their duties. All examinations and tests by the Government will be performed in such a manner as will not unduly delay work.

4.0 REPORTING REQUIREMENTS AND DELIVERABLES

All documentation required as deliverables under this contract will become property of the Government upon delivery. All documentation packages that the Contractor generates for the Government shall be provided to the Government on a non-proprietary basis and with unlimited data rights.

The Contractor shall provide QA inspection reports for each hardware component (body, base cap and adapter) which include dimensional data for, at a minimum, every 10th part produced. The Contractor shall provide Certification of Proof that all assembled units (body / cap assemblies) were pressure tested and found acceptable. (Note: only “Passed” units will be accepted by the Government.) The Contractor shall provide Material Certifications and a Certificate of Conformance for the production of the ASM HG machined hardware components.

4.1 Government Technical Point of Contacts

Hardware and reporting deliverables, as specified here in, will be reviewed and, if acceptable, approved by the Technical Points of Contact (TPOCs):

4.1.1 Documentation

The paragraphs below describe the types of documentation that may be required from the Contractor.

4.1.1.1 Requests for Deviations

The Contractor is responsible for preparing and submitting all Requests for Deviation (RFD). A single RFD shall be submitted for each proposed change to the engineering requirements as specified on any product documentation, this SOW, and/or contract. Each RFD shall contain at a minimum a description of the deviation, need for the deviation, proof/reason the change will not hinder any other requirement, and the corrective action taken. An RFD shall also be required to document an as-built, discrepant configuration.

4.1.1.2 Quality Control Program Plan

A Quality Control Program Plan shall be written and submitted by the Contractor. This document shall address all aspects of production, testing, and inspection as called out in the product documentation, SOW, and contract. This document shall be submitted within 30 days of contract award. All production, inspection, and testing shall adhere to the requirements of this document for the life of the contract. If any changes are made to the Quality Control Program Plan during the use of this contract, the Contractor shall notify the Government in writing of these changes. Changes to the Quality Control Program Plan may result in the necessity for additional First Article testing. This additional First Article sample and test series shall be at the Contractor’s expense.

4.1.1.3 Special Tooling and Equipment Report

The Contractor shall design, fabricate or procure all special tooling, test equipment and gauges required to produce, test and inspect ASM Hand Grenade hardware component deliverables.

At least one month prior to the start of manufacturing, the Contractor shall prepare and submit a list of special hard tooling used to produce the ASM Hand Grenade hardware components.

4.1.1.4 Certificate of Compliance

A Certificate of Compliance shall accompany each delivery of hardware to the Government, as specified in Sections 3.1.2 and 3.1.3. Certificates shall certify that the documents submitted are accurate and that the hardware submitted meets the requirements of this SOW, product documentation and the contract. The Certificate of Compliance shall include the signature of a Contractor representative authorized to make such certification. This requirement also applies to any sub-vendor processes used during the manufacturing of ASM Hand Grenade parts.

4.1.1.5 Quality Assurance Inspection Reports

The Contractor shall provide QA inspection reports for each hardware component (body, base cap and adapter) which include dimensional data for, at a minimum, every 10th part produced.

4.1.1.6 Certification of Analysis

As specified in Sections 3.1.2 and 3.1.3, the Contractor shall provide a Certification of Analysis as proof that all assembled units (body / cap assemblies) were pressure tested and found acceptable. (Note: only "Passed" units will be accepted by the Government.)

4.1.1.7 Material Certifications

The Contractor shall provide Material Certifications for all materials used for the production of the ASM HG machined hardware components. This certificate will serve as proof that all materials used for the manufacture of parts meet the requirements of the drawings, SOW and contract.

4.1.7 Program Progress Reports

The Contractor shall submit monthly progress reports. These reports shall be the vehicle whereby the Government may be appraised as to work accomplished, work remaining, key personnel changes, milestone achievement, quality problems, raw material procurement schedules, tooling plans, and potential design changes. This report cycle starts on the award date and continues until the contract is completed.

4.2 Deliverables Schedule

ASM Hand Grenade MOD 0

Required Deliverables	Qty / Due Date
430-174-0013 Body & Cap Assembly	TOTAL QTY DUE: 16500 (w/ 5000 minimum) / 4 Months ARO Qty 3000 / Every 4 weeks thereafter until order is fulfilled
430-174-0005 Adapter	TOTAL QTY DUE: 16500 (w/ 5000 minimum) / 4 Months ARO Qty 3000 / Every 4 weeks thereafter until order is fulfilled

4.3 Hardware Deliverables

- Sixteen Thousand Five Hundred (16500) ASM Hand Grenade MOD 0 Body & Cap Assemblies and Adapters with Options to procure additional quantities.

The Contractor shall be responsible for coordinating and shipping of deliverables and required documentation to the required destination as follows:

5.0 PACKAGING

The Contractor shall package deliverables with no more than one hundred (100) assemblies per packaging container. Deliverables shall be packaged in structurally sound containers, such as, corrugated fiberboard boxes. Deliverables shall not be stacked unless a protective layering is utilized to protect the assemblies (i.e., foam or fiber “egg crate” type liners). Each container must be legibly marked with the part name, part number, revision letter, quantity, contract number, and Technical point of contact’s (TPOC’s) information.

Shipments shall be palletized on a standard, 40 x 48 inch wooden pallet, where a standard forklift / hand truck may be utilized to handle the pallet load. Pallet loads must be stable, and to the greatest extent possible, provide a level top for ease of stacking. A palletized load shall be of a size to allow for placement of two loads high and wide in a conveyance. The weight capacity of the pallet must be adequate for the load. The load shall be packaged and contained in a manner that will not damage any of the inner contents / assemblies, as well as permit safe handling during shipment and storage

5.1 SECURITY

All deliverables associated with this SOW are “unclassified.”