

**ATTACHMENT J-1**  
**Statement of Work**  
**For**  
**PROPULSION SYTEMS DEPARTMENT**  
**Solid Propulsion Systems**

**1.0 Scope**

The Contractor shall provide specialized engineering support to the Marshall Space Flight Center (MSFC) Engineering Directorate including, but not limited to, the Solid Propulsion Systems Division. The contractor shall provide specialized engineering expertise, technical expertise, program support, and leadership expertise for systems definition, design, development, test, and operation of solid propulsion systems for space transportation applications. The scope includes, but not limited to, supporting all aspects of systems engineering and analysis for solid motor requirement definition, design, development, test, and operations.

**2.0 Task Order Management and Reporting**

**A. Contractor Management**

The Contractor shall provide the planning, coordination, technical direction, and surveillance of the activities necessary to assure disciplined performance of work and timely application of resources for the accomplishment of all tasks issued under the order. The Contractor shall be responsible for maintaining communication with each supported organization and alerting the Contracting Specialist immediately of any problems that would prevent meeting established milestones.

**B. Data Requirements Descriptions (DRDs)**

The contractor shall report and document this work and fulfill the requirements of associated Data Requirement Descriptions (DRD's) as outlined in Data Procurement Document (DPD) 1167 (Attachment J-2). The contractor shall determine the data restriction that applies to each data deliverable and mark or transmit the data restriction in accordance with section 2.3.3 of the Data Procurement Document

1. The Contractor shall submit a Monthly Status Report in accordance with DRD 1167MA-003. Any presentation, reports, analyses or technical memorandum that is developed during the execution shall be pre-coordinated with the task order lead and final copies provided to the task order lead.

The Contractor shall provide NASA with necessary information on project progress to allow the Government to monitor product assurance, identify significant problems, and implement corrective action as applicable based on the Contractor's performance.

The Contractor shall develop and maintain a Work Breakdown Structure (WBS) defining all task elements contained in this Task Order and in accordance with established GSA rates per hours worked.

2. The Contractor shall submit a Badged Employee and Remote IT User Listing in accordance with DRD 1167MA-001.
3. The Contractor shall submit a Contractor Employee Clearance Document in accordance with DRD 1167MA-002.
4. The Contractor shall submit a Position Risk Designation for Non-NASA Employees in accordance with DRD 1167MA-004.
5. The contractor shall be responsible for information and information technology (IT) security when physical or electronic access to NASA's computer systems, networks, or IT infrastructure is required or when NASA information is stored, generated or exchanged with NASA or on behalf of NASA, regardless of where the information resides. The contractor shall prepare a Contract Information Technology Security Program Plan (CITSPP) that documents how the contractor will be responsible for information and IT security in accordance with DRD 1167CD-001.
6. The contractor shall establish and implement an industrial safety, occupational health, and environmental program and provide a signed Safety, Health, and Environmental (SHE) Work Agreement in accordance with DRD 1167SA-001.

### **3.0 Technical Requirements**

The contractor shall be responsible for information and information technology (IT) security when physical or electronic access to NASA's computer systems, networks, or IT infrastructure is required or when NASA information is stored, processed, generated or exchanged with NASA or on behalf of NASA, regardless of where the information resides.

All data files and reports electronically delivered shall comply with Technical Standard 1194.21 of the Rehabilitation Act of 1973, Section 508.

Tasks shall be defined as follows:

#### **3.1 Booster Deceleration Motors (BDM) – Closed November 2007**

The contractor shall define requirements of Booster Deceleration Motors components, propellant liners, gel propellants for advanced propulsion applications, small solid systems for RCS and power generation applications, insulation case joints, seals, and nozzles for various Ares vehicle elements.

The contractor shall design and develop all or partial components of hybrid motor programs, Solid Rocket Boosters components, propellant liners, propellants for advanced propulsion applications, small solid systems for RCS and power generation applications, insulation case joints, seals, and nozzles for various Ares vehicle elements.

The contractor shall support the development of test plans and evaluate all or partial components of hybrid motor programs, Solid Rocket Boosters components, propellant liners, gel propellants for advanced propulsion applications, small solid systems for RCS and power generation applications, insulation case joints, seals, and nozzles for various Ares vehicle elements.

The contractor shall provide specialized engineering of propellant sensitivity studies supply knowledge assets available for application to future programs for various Ares vehicle elements.

The contractor shall provide development support for the generation of tool to support trade studies for solid boost and assist applications, man-rating studies of solid and hybrid systems, and exploring small solid systems for RCS and power generation applications for various Ares vehicle elements.

### **3.2 Ullage Settling Motors (USM)**

The contractor shall define requirements of Ullage Settling Motors components, propellant liners, gel propellants for advanced propulsion applications, small solid systems for RCS and power generation applications, insulation case joints, seals, and nozzles for various Ares vehicle elements.

The contractor shall design and develop all or partial components of hybrid motor programs, Solid Rocket Boosters components, propellant liners, propellants for advanced propulsion applications, small solid systems for RCS and power generation applications, insulation case joints, seals, and nozzles for various Ares vehicle elements.

The contractor shall support the development of test plans and evaluate all or partial components of hybrid motor programs, Solid Rocket Boosters components, propellant liners, gel propellants for advanced propulsion applications, small solid systems for RCS and power generation applications, insulation case joints, seals, and nozzles for various Ares vehicle elements.

The contractor shall provide specialized engineering of propellant sensitivity studies supply knowledge assets available for application to future programs for various Ares vehicle elements.

The contractor shall provide development support for the generation of tool to support trade studies for solid boost and assist applications, man-rating studies of solid and hybrid systems, and exploring small solid systems for RCS and power generation applications for various Ares vehicle elements.

### **3.3 First Stage 5 Segment Motor – Closed March 2008**

### **3.4 First Stage Structure & Mechanical Support**

The contractor shall provide structural and mechanical support for the development of solid rocket booster motors.

### **3.5 NASA MSFC Solid Propulsion Systems Support**

*(Authorization to proceed with this subtask will be provided by the Contracting Officer in written direction.)*

The contractor shall provide engineering development, oversight, and integration of solid propulsion systems for space transportation applications. This shall include providing component and systems engineering expertise for development or evaluation of solid propulsion advanced technologies, conceptual designs, detailed design, system (ballistic) analyses, component and system integration, test planning, testing, and evaluation of experimental data.

### **4.0 Travel**

The contractor shall travel as requested to accomplish each technical requirement. Any travel must be approved by the Contractor Officer's Technical Representative (COTR) or task order technical monitor, prior to travel.

The contractor's monthly report shall contain travel detail to include travel destination, dates of travel, number of people who traveled, and purpose of the travel.

### **5.0 Materials**

No materials are currently required for this order. However, this may change based on the customer's requirements as directed by the Contractor Officer's Technical Representative (COTR) or task order technical monitor. Any materials being purchased must be approved by the Contracting Officer prior to purchase.

### **6.0 Reserved**

### **7.0 Personnel Skill Levels**

The Contractor shall provide skills at a level to perform the subtasks in this order.

### **8.0 Technical Milestones and Deliverables**

Specified under Section 2.B of the SOW; any additional deliverables for specific subtasks are specified under Section 3.0.