

**ATTACHMENT J-1
STATEMENT OF WORK
FOR
SPECIALIZED ENGINEERING SUPPORT FOR TEST LABORATORY (ET)**

1.0 Scope

The Contractor shall provide specialized engineering testing services and expertise as required by the Test Laboratory (ET) at Marshall Space Flight Center (MSFC) in support of the thermal protection system (TPS) for the Constellation Program (or other Space Launch System Programs as designated by NASA). The support includes the selection and characterization of materials, component development, and verification and validation testing, as determined and directed by Constellation requirements (or other Space Launch System Programs as designated by NASA). The Contractor shall perform specialized test engineering support under two areas:

- Material Environments Test Complex (METCO) - test operations support for Ares testing (or other Space Launch System Programs as designated by NASA) at the MSFC Hot Gas Facility and the MSFC Hyperthermal Facility.
- Other ET facilities – testing related to propulsion systems and subsystems, experimental fluids and the environment, structural strength, and structural dynamics.

2.0 METCO Support

For support of METCO, the Contractor shall coordinate test requirements, prepare test articles and equipment, perform tests, compile test data, and report test results for component and thermal protection systems. The Contractor shall also operate and maintain the facility and the various systems (i.e., the mechanical system, instrumentation, the control system, and the data reduction system) associated with the facility.

3.0 ET Facilities Support

For support of other ET facilities, the Contractor shall coordinate test requirements, prepare test articles and equipment, perform tests, and compile test data for component and thermal protection systems. The Contractor shall also operate and maintain the facility and the various systems (i.e., the mechanical system, instrumentation, the control system, and the data reduction system) associated with the facility.

4.0 Technical Requirements

a. The Contractor shall maintain facility operating procedures in accordance with the most recent version of ET standards (i.e., the applicable organizational issuances (OIs) which can be accessed at <http://midl.msfc.nasa.gov>). The procedures pertain to test and checkout, facility operation, facility activation, operational guidelines, and test preparation sheets. The Contractor shall provide certified operators for thermographic imaging to fulfill imaging requirements at MSFC and other sites as required.

- b. The Contractor shall provide technical information concerning any invention, discovery, improvement, or innovation made by the Contractor in the performance of work under this contract. Technology Reports shall be prepared in accordance with DRD 1329CD-001.
- c. The Contractor shall prepare and deliver a Badged Employee and Remote IT User Listings in accordance with DRD 1329MA-001.
- d. The Contractor shall prepare and deliver a Contractor Employee Clearance Documents in accordance with DRD 1329MA-002.
- e. The Contractor shall prepare and deliver a Monthly Progress Report in accordance with DRD 1329MA-003.
- f. The Contractor shall prepare and deliver a Position Risk Designation for Non-NASA Employee in accordance with DRD 1329MA-004.
- g. The Contractor shall establish and implement an industrial safety, occupational health, and environmental program that (1) prevents employee fatalities, (2) reduces the number of incidents, (3) reduces the severity of employee injuries and illnesses, and (4) protects the environment through the ongoing planning, implementation, integration and management control in accordance with DRD 1329SA-001. The SHE Plan shall address each of the following MSFC SHE core program requirements in detail that are applicable to the contracted effort and include a matrix that identifies where each requirement is addressed:
 - Management leadership and employee involvement.
 - Worksite analysis.
 - Hazard prevention and control.
 - Safety, health and environmental training.
- h. The Contractor shall report mishaps and safety statistics in accordance with DRD 1329SA-002. The Contractor shall submit directly into the NASA Incident Reporting Information System (IRIS) or shall use the forms listed in section 15.4 of DRD 1329SA-002 or electronic equivalent to report mishaps and related information required to produce the safety metrics.

5.0 Materials

To the extent materials are needed to perform this contract, the Contractor shall obtain the approval of the Contracting Officer prior to purchase.

6.0 Travel

The Contractor shall travel as directed to accomplish each technical requirement. Travel will be performed on a cost reimbursement basis and shall be pre-approved by the Contracting Officer.