Statement of Work for Maintenance and Calibration of Flight Loads Laboratory

Load Frame Hydraulics Systems

1.0 Introduction

1.1 Background

The NASA Armstrong Flight Loads Laboratory (FLL) is a unique national laboratory in which structural testing is conducted to support aerospace research and structures programs. The Load Frames, Linear Variable Differential Transformers (LVDTs), Load Cells and Analog to Digital Converter are typically used in tests to include calibration, proof loading, strength verification, stiffness and material characterization.

1.2 General Requirements

Provide On-Site Preventive Maintenance and System Calibration for 1 Base Year, on NASA Armstrong Flight Loads Laboratory (FLL) MTS 318.10, MTS 204.41 and Shore Western D23367 and all related ancillary components, including calibration of the 22 KIP, 100 KIP, and 200 KIP load cells, LVDTs and Analog to Digital (A/D) converters and Load Frame Controller . All the systems currently use MTS TESTSTAR IIM with version 5 software. Period of performance is 8/1/14 thru 7/31/15.

2.0 TASKS

2.1 The Contractor shall provide the Government within the twelve (12) month contract period: One (1) systems preventative maintenance inspection/calibration site visit defined as: Provide Calibrations of Frame Load Cells, Linear Variable Differential Transformers (LVDTs), inspection checks of the Analog to Digital Converters, and Load Frame Controller to verify the system is operating within specifications. Certification of performance documentation of the work conducted in 2.1 shall be provided. See section 3.1.

2.2 The work in 2.1 shall be initiated by the Contractor within the first month of the contract period by contacting the FLL Equipment Coordinator, the designated government representative (DGR) or the Government Contracting Officer by telephone or email to determine site visitation dates. The preventative maintenance/calibration will be performed at The NASA Armstrong Flight Loads Laboratory (FLL) Building 4820 Edwards AFB California 93523 as designated in section 4.9. Performance completion shall be achieved within Seventy-Two (72) Hours following the arrival of the field technician. The only exceptions to this requirement will be for extenuating circumstances, which are considered beyond the immediate control of maintenance/service personnel, and to be reasonable or prudent within industry standards.

2.3 The Contractor shall provide all test equipment, including, but not limited to: tools, diagnostic and alignment devices, meters, hardware, and software, etc. needed to perform the work.

3.0 DELIVERABLES

3.1 Contractor shall provide the Government with a detailed Calibration report and Maintenance/Service report following each calibration or preventative maintenance action. The contractor shall employ the principles and philosophy of end-to-end calibration. This means that the system-level field calibration practice involves all measurement process elements, including transducer, cables, signal conditioners and controllers. The elements of the system are evaluated as a unit, eliminating considerable uncertainty.
The report shall include at minimum: contract number, date and time notified, date and time arrived, name of technician, type/model/serial number of equipment serviced, time spent on calibration/repair, a description of any malfunction, comments as to the cause of the malfunction, a description of any parts needing to be replaced, the time and additional cost to procure the replacement parts (if applicable), date and time system/equipment are returned to operational condition. Additionally contractor shall affix a tag on equipment upon completion of a preventative maintenance inspection/calibration. Tag may either be a sticker or hanging tag. As a minimum the tag shall contain, legibly printed: the name of the contractor, technician performing inspection/calibration, date of inspection/calibration and the identification number of the equipment inspected/calibrated.

Calibration references, as requested.
In accordance with ISO 9001, section 7.6; the following two areas are relevant:

(1) To ensure valid results, measuring equipment shall be calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurements standard; where no such standard exist, the basis used for calibration or verification shall be recorded, and at specified intervals, or prior to use, against measurement standards traceable to international or national measurements standard.

(2) In addition, the organization shall assess and record the validity of the previous measuring results when the equipment is found not to conform to requirements. The organization shall take appropriate action on the equipment and any product affected. Records of the results of calibration and verification shall be maintained.

4.0 SPECIAL REQUIRMENTS

4.1 The Base Year Period of Performance (POP) shall be 8/1/2014 through 7/31/2015.

4.2 The FLL Equipment Coordinator, or the Designated Government Representative (DGR) or the Government Contracting Officer are the only Government representatives authorized to place or receive calls to initiate preventative maintenance/calibration task actions.

4.3 Unless otherwise specified herein, there shall be no additional maintenance charges, regardless of when the maintenance is performed, the time spent by maintenance personnel after arrival at the site (or lodging while awaiting the arrival of additional maintenance personnel, equipment, or delivery of parts), or for transportation to, or from, other sites.
Overtime work, or work performed outside normal business, are not included in this order.

4.4 Services are to be performed Monday through Friday (excluding federal holidays), during the hours of 7:00 AM and 4:00 PM, local time.

4.5 The contractor must have full knowledge of the referenced equipment, and must be able to perform all work in compliance with the manufacturer technical specifications, current commercial practices and in accordance with this statement of work.

4.6 The contractor is cautioned to not exceed the amount of the Firm Fixed Price (FFP) acquisition. Failure to comply with this requirement shall result in invoice rejection, or reduction of the invoiced amount to the allowed amount.

4.7 The contractor must ensure that all personnel involved in the scope of this work order are aware of monetary limitations of the FFP. In the event the vendor is confronted with uncertainly related to performance, or this procurement, they are instructed to immediately notify the Contracting Officer and Designated Government Representative, who shall contact the end user.

4.8 In the event the contractor is confronted with uncertainty related to performance, or has knowledge of a necessity that has not been previously identified within the limitations of this contractual agreement, they are instructed to immediately notify the Designated Government Representative (DGR).

4.9 Service Location:
NASA Armstrong Flight Loads Laboratory (FLL)
Bldg.4820
Edwards AFB, CA 93523.

Area POC: Ronnie Haraguchi; (616) 276-2367

FLL Equipment Coordinator: David Neufeld; (616) 276-3682

5.0 EQUIPMENT LISTING

(1) MAINTENANCE AGREEMENT IAW STATEMENT OF WORK
(2) Load Frame MTS Model Number: 318.10B S/N: 1271203
(3) Load Frame MTS Model Number: 311.21, S/N: 106

(4) Load Frame Shore Western Model Number: D23367, S/N: 32014
(5) 22 Kip Force Transducer MTS Model 661.20E-6 S/N 100481
(6) 110 Kip Force Transducer MTS Model 661.23A--05 S/N 2364
(7) 220 Kip Force Transducer MTS Model 661.31A-05 S/N 539
(8) TESTSTAR IIM MTS Model 493.10 S/N 1143757