

CATALOG OF AIRCRAFT STATEMENT OF WORK

September 26, 2006

Attachment A

1. Background

GSFC's WFF is responsible for overseeing an aircraft catalog in support of science missions. These missions have been primarily focused on the needs of the Earth science community, gathering data via radiometers, lasers, in-situ, and other sensors provided by a variety of entities to include NASA and other government agencies and university partners. Historically, earth science mission requirements are known at least 6 months in advance, though at times mission request may come in with much less notice. Scientific targets of opportunity may require rapid deployment of assets with minimum notice. Response time for an individual mission can range from days to several months. Missions typically involve from 20 to 150 hours of flying. Payloads are normally installed, checked out, flown, and de installed over less than an 8-week period.

Past missions have been flown on the following type aircraft:

Light Aircraft (Less than 12,500 lbs.)	CE 310, CE182, DHC-6 Twin Otter, J31 Jetstream, B-200 King Air
Medium Aircraft (Less than 50,000 max take off weight, greater than 12,500lbs max take off weight)	Citation, CEII and other Citation series jets.
Heavy Lift (Over 50,000 lbs.)	DC-8, P-3, WB-57, ER-2, C-130
Unoccupied Aerial Systems	Aerosonde
Lighter-than-Air	None flown to date

The contractor will be tasked by GSFC's WFF on a per-mission-basis pertaining to the airborne science projects, and will work directly with management and research teams to plan, schedule, and integrate instrumentation into the aircraft and fly the payload(s) within and outside of the continental United States. The instrumentation payload(s) will be provided by the U.S. Government or by non-U.S. Government customers. The core aspect of this activity is to provide access to aircraft platforms for use as instrumentation carriers. The contractor will be required to have "passed" an acceptable NASA safety review prior to the award of a Delivery Order against this BPA..

2. BPA Categories will be:

2.1 Manned Aircraft (Light: under 12,500 MTGW, Medium: 12,500 to 100,000 MTGW, Heavy: over 100,000 pounds MTGW)

These aircraft are defined as Federal Aviation Administration (or other government agency) certificated aircraft that are able to carry light-to-heavy payloads ranging from as little as a 50 pound payload, to payloads in excess of 30,000 pounds of payload with a full fuel load. Aircraft maintained under the FAA Standard Certificate of Airworthiness are preferred but not required. For non FAA Certified Aircraft, the Wallops Airworthiness Review Board will certify the installation as airworthy.

These aircraft will be used as remote sensing or in-situ measurement platforms in support of various NASA projects or missions or other U.S. Government missions, such as instrument development and scientific applications with specific research goals and objectives. The aircraft must be equipped with existing viewing ports and power systems in place to accommodate the NASA payloads.

The contractor shall provide a fixed flight hour rate to cover all oil and lubricants, excluding fuel, which shall be billed directly at a cost bases determined at the time of the mission. In addition, a daily fixed rate shall be quoted covering all expenses required to maintain the aircraft and crew at the site of the research.

The contractor shall provide mission peculiar support consisting of ground support rentals, travel and per diem, landing fees, shipping, logistics support, and navigation fees as direct charges.

## 2.2 Unmanned Aerial Systems (UAS)

The contractor shall provide UAS services to meet NASA science requirements. These missions may require over-the-horizon capabilities. These UAS's will be used as remote sensing or in-situ measurement platforms in support of various NASA projects or missions, or other U.S. Government missions, such as instrument development and scientific applications with specific research goals and objectives. UAS's are defined as those capable of carrying in excess of 2 pounds with a full fuel load. UAS's in this category shall be capable of minimum flight duration of 4 hours.

The contractor shall provide a fixed flight hour rate to cover all oil and lubricants, excluding fuel, which shall be billed directly at a cost bases determined at the time of the mission. In addition, a daily fixed rate shall be quoted covering all expenses required to maintain the aircraft and crew at the site of the research.

The contractor shall provide mission peculiar support consisting of ground support rentals, travel and per diem, landing fees, shipping, logistics support, and navigation fees as direct charges.

## 2.3 Lighter-than-Air

The contractor shall provide lighter-than-air platforms, either manned or unmanned. This platform must also be capable, in its present configuration, to support scientific payload integration and operations.

The contractor shall provide a fixed flight hour rate to cover all oil and lubricants, excluding fuel, which shall be billed directly at a cost bases determined at the time of the mission. In addition, a daily fixed rate shall be quoted covering all expenses required to maintain the aircraft and crew at the site of the research.

The contractor shall provide mission peculiar support consisting of ground support rentals, travel and per diem, landing fees, shipping, logistics support, and navigation fees as direct charges.

### 3. Other

From time to time, the contractor for the platforms listed shall be responsible for conducting the complete engineering, fabrication, and installation required for integrating payloads in the vehicles--from the preliminary design, to fabrication of required structure, and any aircraft modifications, through the entire installation process.

3.1 Engineering. Structural, aeronautical, and electrical engineering support shall be provided to effect aircraft modifications and structural repairs, based on factors such as stress analysis, engineering drawings, configuration engineering, and aerodynamic analysis.

3.2 Fabrication. Fabrication of sheet metal, fiberglass and composite materials, and machining work, will be provided to support aircraft modifications needed to integrate scientific instrumentation payloads.

3.3 Installation. Installation of equipment, racks, power cables, experimenter cables, plumbing of compressed air and nitrogen, seats, and associated structure, and subsequent installation.