Exhibit A – Introduction and Justification

New Mexico State University/Physical Science Laboratory (NMSU/PSL) is currently the only Unmanned Aircraft Systems (UAS) Flight Test Center authorized by the Federal Aviation Administration (FAA). The NMSU UASFTC is authorized to conduct UAS flights for testing, training, and demonstrations within the 15,000 sq mi of FAA authorized airspace of SW New Mexico (see Exhibit C – PSL NMSU UAS Airspace Boundary). NMSU performs research and development flights for U.S. government elements under contract and through Memorandum of Understandings including the Department of Defense.

1. The Aerostar and Orbiter UAS were developed under AF contract UAS Validation and Integration Program -- FA9201-08-D-0093, as part of a proof of concept for developing a process for establishing a UASCOA in the National Airspace System (NAS). However, these UAS's will not become part of the Air Force inventory. Therefore, use of the Federal frequencies for the uplinks and downlinks is requested to perform this critical research and development testing.

2. The Aerostar and Orbiter UAS are used support the testing of a variety of Federal and DoD payloads and perform other operational tests and validation of UAS procedures for safety of flight for manned aircraft in the National Airspace system. Therefore use of Federal frequencies for the UAS command and control uplinks and downlinks is requested.

3. Use of these Federal frequencies will be coordinated with the DoD-AFC (WSMR) office, which will schedule use of these frequencies. This statement has been coordinated with Mr. Wyman the DOD-AFC Coordinator at WSMR (575-678-3402).

The equipment used for both ground and aboard the UAS is similar or in most cases identical. Each UAS is configured with control and data links. The UAS typically are set up as one of the following:

a. C-band uplink and downlink / UHF backup

b. UHF uplink / S-band video and data downlink

c. L-band uplink / S-band video and data downlink

A primary and a secondary control link is always used. Uplinks, which contain the control commands, are always less bandwidth than downlinks, which often contain UAS telemetry and payload data.