Exhibit 1
STA File Number: 0531-EX-ST-2014
Booz Allen Hamilton Inc.

Cubesat Transmission and Operation Information

The cubesat will be a non-geostationary satellite deployed from the International Space Station. The cubesat will have the dimensions of 10cm x 10cm x 10cm and will have a total mass of approximately 1.3 kg. It will operate at an orbital inclination angle of 51.65 degrees, with an apogee of 420 km and perigee of 420 km, and an orbital period of approximately 93 minutes. The cubesat will be the only satellite in the system.

The cubesat will have passive magnetic attitude control. The cubesat will have no propulsion or pyrotechnic capability. Atmospheric friction will slow the satellite and reduce the altitude of the orbit, until de-orbiting occurs approximately 1.2 years after launch. See the Orbital Debris Assessment Report included as Exhibit 2 for details.

The cubesat will have one (1) omni antenna (Astronautical Development Helium -100). The cubesat will transmit to the ground stations using the 437.615 MHz frequency. The beacon frequency will be 437.615 MHz. The maximum gain will be 2 dBi. Azimuthal range will be 360 degrees and +/- 90 degrees for elevation (180 degree total). The antenna will deploy 45 minutes following cubesat deployment from the International Space Station.

The cubesat will only transmit on a schedule supplied from the ground control and only when in view of the specified ground stations listed below or other programmable locations in order to maintain active control of the cubesat transmitter in order to prevent interference and stop any unforeseen interference as quickly as possible. Booz Allen Hamilton has submitted a frequency coordination request to the IARU US representative. The Stop-Buzzer contact is John Swartz (919) 595-4825 office, (919) 270-5074 mobile.

The cubesat itself is being built with commercial or industrial grade commercial off the shelf components. The satellite contains the following systems:

- EPS – Electrical Power Subsystem: Clyde Space EPS power system and 10W Lithium Ion battery. Power generation by four pairs of solar panels with storage in the Clyde Space Li-ion battery.
- Processor Board – The processor board controls the satellite functions during flight. Functions include control of the camera, collection and processing of the optical package data, all onboard housekeeping, data packaging.
- Nav/Payload sub-systems – The NAV/payload board contains the GPS, analog and ADC data from the photodetectors.
- Attitude Control sub-system - The cubesat will have passive magnetic attitude control.
- Mechanical structure - The cubesat uses a Pumkin enclosure and Booz Allen designed solar panels.

There will be two (2) ground station directional antennas transmitting to the cubesat using the 145.930 MHz frequency located at two (2) Booz Allen Hamilton facilities identified in this STA application. The antennas will be custom built Ettus Radio/ Microcircuits Yagi antennas, the gain will be 16.3 dBi, and the beam width will be 44 Degrees in both the horizontal and vertical

directions. Each Yagi antenna will be mounted on an antenna rotator for pointing the antenna at the satellite; the antenna rotator will have an azimuthal range of 360 degrees. Each Yagi ground antenna will have a minimum angle of elevation of 20 degrees. The overall length of the ground antennas will be 3.7 meters. The Yagi ground antennas will be right hand circularly polarized (RHCP).

The Yagi antenna located at the Booz Allen Hamilton facility in Linthicum, Maryland will have an overall height above ground to the tip of the antenna of 5 meters. The elevation of ground at antenna site above mean sea level will be 81 meters. The nearest airport is 2 kilometers.

The antenna located at the Booz Allen Hamilton facility in Rochester, Minnesota will have an overall height above ground to the tip of the antenna of 5 meters. The elevation of ground at the antenna site above mean sea level will be 331 meters. The nearest airport is 2.5 kilometers.