Applicant: Universal Space Network File No: SES-STA-20141022-00814 Special Temporary Authority (STA)

Universal Space Network Corporation is granted special temporary authority, beginning November 18, 2014 and ending December 03, 2014, to operate its NAALEHU, HI, 13 meter earth station to assist the European Space Agency (ESA) with the orbit raising operations of the Galileo FOC 1 and FOC 2 space stations under the following conditions:

- 1. Operations are limited to:
 - a. Earth Station transmits frequency: 2046.051, 2048.887, (2060.181 MHz, emergency use only)
 - i. Polarization: Left and Right hand circular
 - ii. Emission parameters: 200KG2D, 68.0 dBW/carrier, 51 dBW/carrier/4kHz
 - iii. Modulation: 2kbps data PSK onto an 8 kHz subcarrier with 100 kHz ranging tones
 - iv. Antenna azimuth authorized for 0-360 $^{\circ};$ antenna elevation authorized for 5-90 $^{\circ}$
 - b. Earth Station receive frequencies: 2221.995, 2225.024; 2237.250 MHz
- 2. All transmissions in the band 2200-2290 MHz will comply with national and international power flux-density limits as specified in ITU-R 21.16.
- 3. Operations shall be on an unprotected, non-interference basis with respect to other authorized stations, including federal stations.
- 4. This STA is to support the early orbit raising operations of the Galileo FOC 1 and FOC 2 space craft. This STA will expire December 03, 2014. Any future requests or extensions will need to submit applications to the FCC to be re-coordinated with NTIA.
- 5. Universal Space Network shall be aware that future non-federal launch and early orbit operations will be considered on a case-by-case basis, especially for requests in the band 2200-2290 MHz, and Universal Space network shall have no expectations that future operations will be approved.
- 6. As soon as possible, USN is required to provide Mr. Jimmy Nguyen (jimmy.nguyen@us.af.mil, (301-225- 3729), Air Force Spectrum Management Office (AFSMO), Rich Rood (richard.l.rood@nasa.gov, 661-276-2138, NASA Dryden SMO), Farzin Manshadi (farzin.manshadi@jpl.nasa.gov, 818-354-0068, NASA JPL/DSN SMO), Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO), Cathy Sham (catherine.c.sham@nasa.gov, 281-483-0124, NASA JSC SMO), Ken Stowe (ken.stowe@navy.mil, NMSC), Johnnie Best (johnnie.w.best1@navy.mil, NMSC), the NOAA Satellite Operations Control Center (SOCC) Shift Supervisor (301) 817-4198 with the LEOP communications plan.
- 7. The STOP BUZZER POC information, for operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned 24/7.

8. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Universal Space Network, Inc.'s risk.