Attachment
OET STA Form
April 2014

Required Supplemental Information

The following additional information is provided pursuant to the Office of Engineering and Technology's Public Notice, "Guidance on Obtaining Experimental Authorizations for Commercial Space Launch Activities," DA: 13-446 (OET, released March 15, 2013):

a. Technical information including frequency, power, emission, latitude and longitude coordinates of the launch site or test operations.

See foregoing STA Form for technical parameters. Both the Launch Vehicle and Special Flight Instrumentation telemetry transmitters will be radiating at full power level during the entire mission profile.

The GPS Metric Tracking transmitter will be radiating at full power level through Second Engine Cut-off, Burn-1 (SECO-1) + 300 seconds (~1360 seconds), at which time it will disabled.

Coordinates for the launch site (LC-37B) are a longitude of 28.531197 degrees North and a latitude of 80.564474 degrees West.

b. An overview of the proposed launch or testing including, if appropriate, identifying the launch facility and the overall mission.

See "Purpose of Operation" on Main STA Form.

c. The anticipated orbital parameters or range of orbital parameters (altitude, inclination) in which the launch vehicle or related spacecraft will operate.

No pieces of the launch vehicle or the spacecraft are planned to be left in orbit at the conclusion of this mission. Spacecraft separation will occur approximately 3 hours 23 minutes and 42 seconds after liftoff (12,222 seconds) leaving the crew module in a -16 nmi (nautical mile) x 3,126 nmi orbit at a 28.8 degree inclination. After spacecraft separation the second stage performs a collision avoidance maneuver and a disposal burn placing it in a -583 nmi x 2,933 nmi orbit at a 33.8 degree inclination. For the second stage, nominal ocean impact is predicted to occur approximately 4 hours 11 minutes and 5 seconds after liftoff (15,065 seconds).

d. A 24-hour contact for interference issues.

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e. If the applicant is also requesting authorization to operate an earth station to communicate with the launch vehicle or spacecraft, it should provide the frequency, power, emission, latitude and longitude coordinates for the earth station. If the applicant is planning to communicate with an earth station operated by another company, the United States government, or one located outside the United States, its territories and possessions, the applicant should include technical parameters of the earth station in an exhibit to the application for reference purposes only.

See attached table, Government Provided Ground-Based Tracking and Destruct Transmitter Assets, which contains a list of the Ground and Tracking and Data Relay System Stations assets of the Federal government that will be used during the flight profile.

ULA Delta IV Heavy / EFT-1 Mission

Government Provided Ground Based Tracking and Destruct Transmitter Assets

Government Provided TDRSS S-Band Downlink Transmitter Assets

The following table contains a list of Government provided Ground Based Systems that will be used for either Vehicle Tracking (5.69GHz) or Vehicle Destruct (421 MHz) and the TDRSS downlink for the S-Band telemetry system (2200-2300 MHz) used for relaying launch vehicle telemetry to the White Sands Complex (WSC) or the Guam Remote Ground Terminal (GRGT) during the mission profile.

ULA has provided an asset identifier, area location, transmitter function, the specific transmitter operating frequency, and the Geographical Coordinates for ground system reference and a longitudinal location for the TDRSS Satellite Systems. ULA suggests using the area location and geographical coordinates for identification purposes.

If you have any questions, please contact ULA representative, Mark Schultz at 303.391.4524 or via email at mark.e.schultz@ulalaunch.com

ULA Delta IV Heavy / EFT-1 Mission

Government Provided Ground Based Tracking and Destruct Transmitter Assets

Government Provided TDRSS S-Band Downlink Transmitter Assets

Government Ground Assets	Transmitter Location / Function	Geographical Coordinates
EASTERN TEST RANGE	United States Florida Kennedy Space Center **Vehicle Tracking: 5.69 GHz**	North Latitude (DD-MM-SS) 28° 28' 43" West Latitude (DD-MM-SS) 80° 40' 30"
ROZENDAL	United States Florida Kennedy Space Center **Vehicle Destruct: 421 MHz**	North Latitude (DD-MM-SS) 28° 26 ' 22 " West Latitude (DD-MM-SS) 80° 35 ' 54 "
CAS ORBIT	United States Florida Kennedy Space Center **Vehicle Destruct: 421 MHz**	North Latitude (DD-MM-SS) 28° 26 ' 22 " West Latitude (DD-MM-SS) 80° 35 ' 54 "
ROZENDAL/MELPAR	United States Florida Kennedy Space Center **Vehicle Destruct: 421 MHz**	North Latitude (DD-MM-SS) 28° 26 ' 22 " West Latitude (DD-MM-SS) 80° 35 ' 54 "
CANOGA	United States Florida Kennedy Space Center **Vehicle Destruct: 421 MHz**	North Latitude (DD-MM-SS) 28° 26 ' 22 " West Latitude (DD-MM-SS) 80° 35 ' 54 "
BROADBEAM/DATRON	United States Florida Tequesta 18205 Southeast County Line Rd **Vehicle Destruct: 421 MHz**	North Latitude (DD-MM-SS) 26° 58 ' 58 " West Latitude (DD-MM-SS) 80° 06 ' 30 "
EASTERN TEST RANGE	United States Florida Patrick Air Force Base **Vehicle Tracking: 5.69 GHz**	North Latitude (DD-MM-SS) 28° 13' 35" West Latitude (DD-MM-SS) 80° 35' 58"
TDRSS	Satellite Systems **S-Band: 2200-2300 MHz**	**Inclination - 0 degrees (Average)** **Longitudinal Locations (Assigned ~30-60 days prior to ILC)** TDRSS 275 and one of the following AOR/POR Loctions) AOR: TDRS 41 or TDRS 46 POR: TDRS 168 or TDRS 171 AOR: Atlantic Operational Region POR: Pacific Operational Region