0328-EX-ST-1999

Orbital Sciences Corporation
21700 Atlantic Boulevard
Dulles, VA 20166
October 1, 1999

Federal Communications Commision Equipment Radio Services
P.O. Box 358320
Pittsburg, PA 15251-5320

Re: Experimental STA for Orbital Sciences Corporation

Dear Sir/Madam,

This letter requests a special temporary authority (STA) for Orbital Sciences Corporation (Orbital) explicitly for the purposes of satellites integration and testing. In November of this year, Orbital will begin communications testing of six satellites to be launched in year 2000. The mission of each satellite is unique, in support of NASA and DoD missions, as well as Orbital's Orbcomm, Orbimage, and International Communications programs. Orbital has already obtained or is in the process of obtaining NTIA or FCC authorization, as applicable, to transmit at radio frequencies (RF) in the final orbit location and configuration associated with each satellite.

Approval of this STA will allow timely verification of the spacecrafts' command, control, and telemetry sub-system, as well as audio/video communications payload, if any. Orbital does not anticipate any additional coordination to be required, other than those already existing, for the frequency bands of interest. The parameters of the RF transmissions for this STA are provided in the attachment. It should be noted that additional shielding of emissions is expected since testing will be performed inside Orbital structures, shielded rooms, and/or anechoic chambers.

Please call me (703/406-5988) if you have any questions concerning this STA. Thank you in advance for your prompt attention to this matter.

Sincerely,

J. Sunny Lee

J. Sunny Lee
Deputy Director
RF Communications Group
Orbital Sciences

Cc: C. Huie
J. Bertel

Attachment:

Special Temporary Authority for Orbital Sciences Corporation

Purpose of Operation: Satellites integration and test

Dates of Operation: Effective between November 11, 1999 and May 11, 2000

Station Locations: Sterling, VA NL 39-00-56; WL 77-25-42
Germantown, MD NL 39-11-27; WL 77-15-45

Beginning of Life Radio Frequency Parameters (Sterling, VA):

Frequency Span, Null-Null Bandwidth (GHz)	Modulation Type	Maximum Effective Isotropic Radiated Power (EIRP)
0.137 – 0.138	Differential Phase Shift Keying, Offset Phase Shift Keying	+20 dBW
0.40006 – 0.40014	Continuous Wave (CW)	+5 dBW
2.094 – 2.096	Binary Phase Shift Keying on Subcarrier	+5 dBW
2.273 – 2.277	Binary Phase Shift Keying	-10 dBW

Beginning of Life Radio Frequency Parameters (Germantown, MD):

Frequency Span, Null-Null Bandwidth (GHz)	Modulation Type	Maximum Effective Isotropic Radiated Power (EIRP)
0.137 – 0.138	Differential Phase Shift Keying, Offset Phase Shift Keying	+20 dBW
0.40006 – 0.40014	Continuous Wave (CW)	+5 dBW
2.039 – 2.040	Binary Phase Shift Keying on Subcarrier	-60 dBW
2.053 – 2.054	Binary Phase Shift Keying Plus Tones on Subcarrier	-60 dBW
2.092 – 2.094	Binary Phase Shift Keying	-60 dBW
2.214 – 2.216	Binary Phase Shift Keying	-10 dBW
2.228 – 2.232	Binary Phase Shift Keying Plus Tones on Subcarrier	-10 dBW
8.115 – 8.265	Offset Quadrature Phase Shift Keying	+10 dBW
8.050 – 8.160	Differential Quadrature Phase-Shift Keying	+30 dBW
8.175 – 8.285	Differential Quadrature Phase-Shift Keying	+30 dBW
8.451 – 8.499	Offset Quadrature Phase Shift Keying	-10 dBW
11.69 – 12.03	Continuous wave (CW)	+10 dBW
11.69 – 11.71	Frequency Shift Keying with Ranging Tones	-50 dBW
17.29 – 17.63	Continuous wave (CW)	-90 dBW

Orbital Sciences is aware that other stations may be licensed on these frequencies, and if any interference occurs, transmissions associated with this application will be immediately terminated.