Exhibit 2

Information Regarding Power Flux Density, Revision 2

File Number: **0356-EX-PL-2015**

Applicant: **Space Exploration Technologies Corp.**

1. Power Flux Density at the Surface of the Earth in the Ku band (10.7-12.7GHz)

While this license application is not under Part 25, SpaceX has used Part 25 as the metric for PFD limits. Section *25.208(b) Power flux density limits* states that:

In the bands 10.95-11.2 and 11.45-11.7 GHz for GSO FSS space stations and 10.7-11.7 GHz for NGSO FSS space stations, the power flux-density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the lower of the following values:

(1) −150 dB(W/m^2) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; −150 + (δ−5)/2 dB(W/ m^2) in any 4 kHz band for angles of arrival (δ) (in degrees) between 5 and 25 degrees above the horizontal plane; and −140 dB(W/ m^2) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane; or

(2) −126 dB(W/ m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; −126 + (δ−5)/2 dB(W/ m^2) in any 1 MHz band for angles of arrival (δ) (in degrees) between 5 and 25 degrees above the horizontal plane; and −116 dB(W/ m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

Note to paragraph (b): These limits relate to the power flux density, which would be obtained under assumed free-space propagation conditions.

The satellite will transmit only for angles of arrival between 40° and 90° above the horizontal plane. Because the transmit power is dynamically adjustable, the transmit power is backed-off between slant and nadir depending on the angle of arrival to ensure compliance with the power flux density limits (see Figure 1).

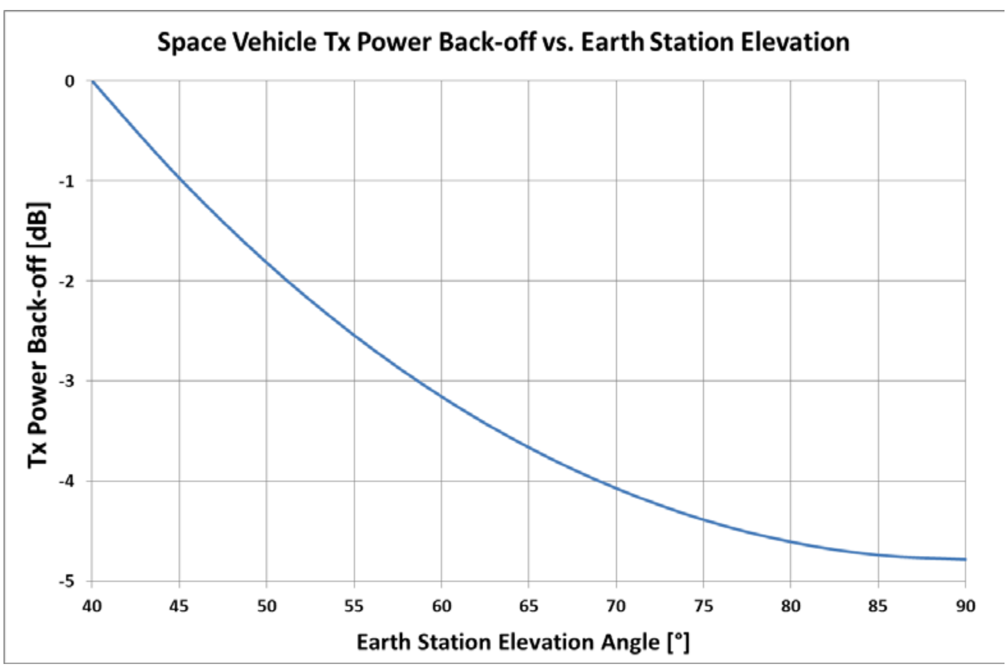


Figure 1. **Satellite Tx power back-off between slant (40° elevation) and nadir (90° elevation) for a 625km orbit. Transmit power is referenced to power at slant (40° elevation).**

Figure 2 shows the spreading loss versus elevation for a 625km orbit. Figure 3 shows the detailed PFD calculations at the surface of the Earth, at slant and nadir. Figure 4 shows PFD versus the elevation angle in both 4 kHz and 1 MHz bandwidth. PFD is constant at any position between slant and nadir and is in compliance with the limits in 25.208(b).

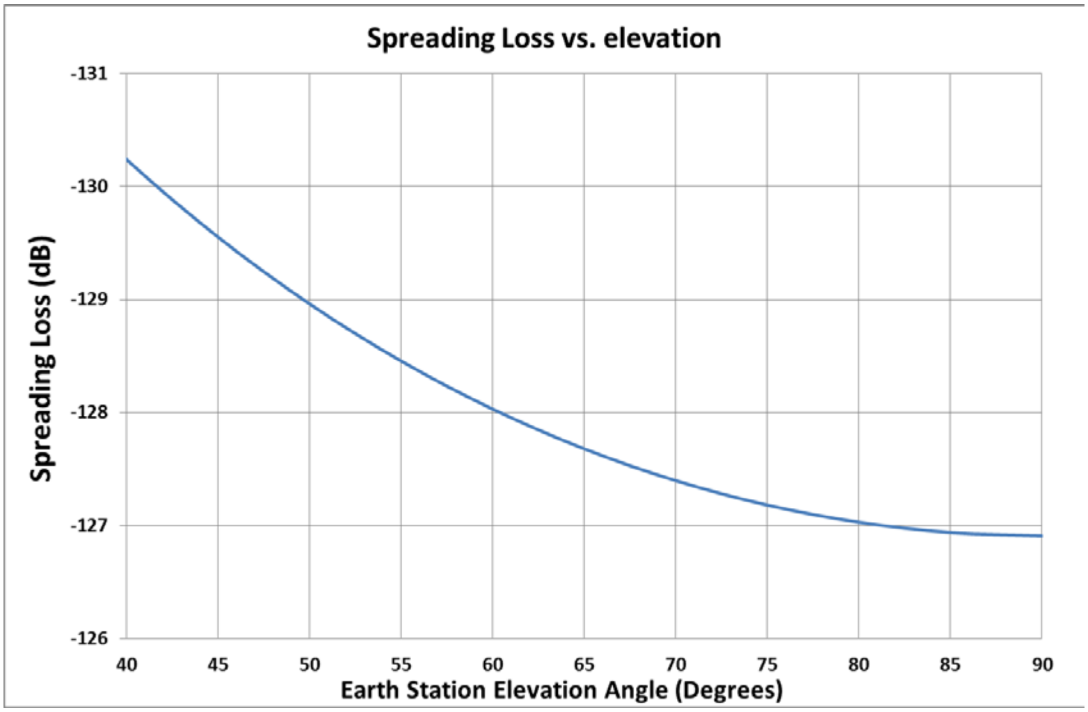
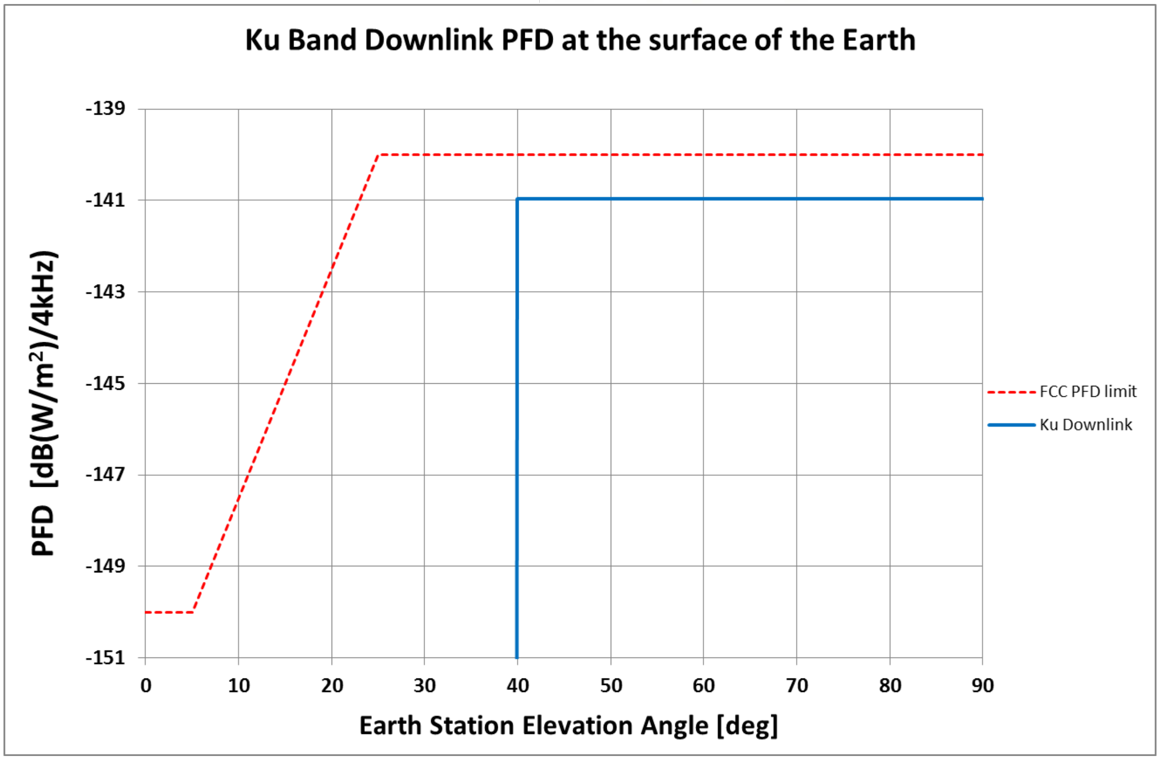


Figure 2. **Spreading loss versus elevation (625km orbit)**

	@ Slant	@ Nadir
Amplifier Power Backoff [dB]	NA	4.78
Amplifier Output Power [W]	4.50	1.50
Amplifier Output Power [dBW]	6.53	1.75
Tx out circuit loss [dB]	1.50	1.50
Tx Antenna Gain [dBi]	27.55	29.00
EIRP [dBW]	32.58	29.25
EIRP density [dBW/Hz]	-46.75	-50.09
EIRP in 4kHz [dBW]	-10.73	-14.06
EIRP in 1MHz [dBW]	13.25	9.91
Spreading loss [dB]	-130.24	-126.91
PFD in 4 kHz [dB(W/m^2)]	**-140.97**	**-140.97**
PFD in 1 MHz [dB(W/m^2)]	**-116.99**	**-117.00**

Figure 3. **PFD at the surface of the Earth (at slant and nadir) produced by the Ku band downlink transmissions**



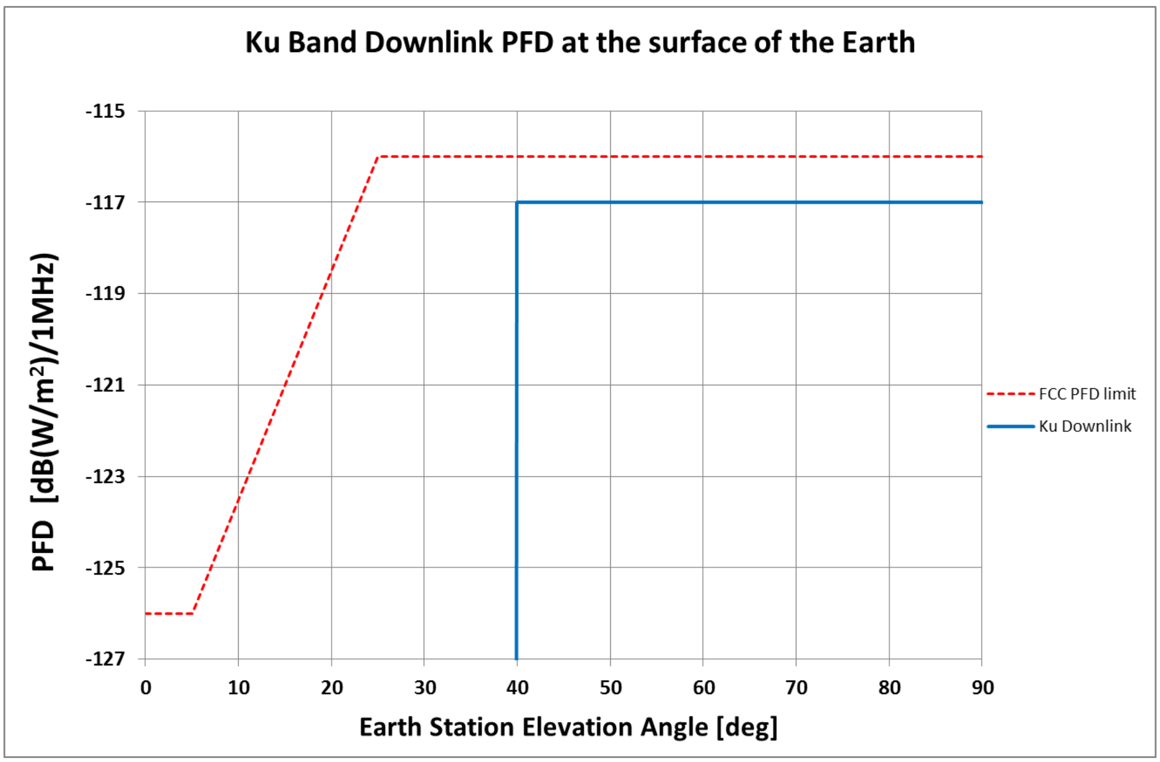


Figure 4. **PFD at the surface of the Earth produced by the Ku band downlink transmissions versus elevation angle. Note that the broadband antenna sidelobes are more than -30dB below the main lobe (see Application Exhibit 5) and have a negligible impact on these calculations.**

2. Power Flux Density at the Geostationary Satellite Orbit in the Ku band (13.75-14.5GHz)

Section *25.208(k) Power flux density limits* states that:

In the 12.75-13.15 GHz, 13.2125-13.25 GHz and 13.75-14.5 GHz bands, the equivalent power flux-density, in the Earth-to-space direction, (EPFDup) produced at any point on the geostationary satellite orbit (GSO) by the emissions from all co-frequency earth stations in a non-geostationary satellite orbit Fixed-Satellite Service (NGSO FSS) system, for all conditions and for all methods of modulation, shall not exceed the following limits for the specified percentages of time limits:

Limits to the EPFDup Radiated by NGSO FSS Systems in Certain Frequency Bands

Frequency band (GHz) for International Allocations	$EPFD_{up}$ $dB(W/m^2)$	Percentage of time during which $EPFD_{up}$ may not be exceeded	Reference bandwidth (kHz)	Reference antenna beamwidth and reference radiation pattern[1]
12.5-12.75; 12.75-13.25; 13.75-14.5	−160	100	40	4° ITU-R S.672-4, Ls=−20

[1]For the case of Ls = −10, the values a = 1.83 and b = 6.32 should be used in the equations in the Annex of Recommendation ITU-R S.672-4 for single-feed circular beams. In all cases of Ls, the parabolic main beam equation should start at zero.

Note to paragraph (k): These limits relate to the uplink equivalent power flux density, which would be obtained under free-space propagation conditions, for all conditions and for all methods of modulation.

The calculations below (Figure 5) shows that EPFDup produced by the transmissions from the two proposed Earth Stations (ES-A and ES-B) never exceed the limit in 25.208(k). Note that the Earth Station transmitter is turned off whenever the direction of the SpaceX Earth Station transmit beam and the GSO arc is less than 12° and the sidelobes of the antenna patterns are at least 30dB down from the main lobe.

	ES-A	ES-B
GSO altitude [km]	35786.00	35786.00
main lobe EIRP @ nadir [dBW]	38.29	45.29
sidelobe level (down from main lobe) [dB]	-30.00	-30.00
max EIRP towards GSO arc [dBW]	8.29	15.29
max EIRP density towards GSO arc [dBW/Hz]	-71.05	-64.05
max EIRP in 40kHz towards GSO arc [dB(W/m^2)]	-25.02	-18.02
Spreading loss [dB]	-162.07	-162.07
EPFD_up [dB(W/m^2)]	-187.09	-180.09

Figure 5. **EPFDup for the proposed ground stations**

3. Power Flux Density at the Surface of the Earth in the band 8025-8400 MHz

Section 25.208 of the Commission rules does not contain power flux density ("PFD") limits at the Earth's surface produced by emissions from NGSO EESS (Earth Exploration Satellite Service) space stations operating in the 8025-8400 MHz band. However, Table 21-4 of the ITU Radio Regulations states that the PFD at the Earth's surface produced by emissions from an EESS space station in the 8025-8400 MHz band, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the following values:

- –150 dB(W/m2) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;
- –150 + 0.5(d -5) dB(W/m2) in any 4 kHz band for angles of arrival (in degrees) between 5 and 25 degrees above the horizontal plane;
- –140 dB(W/m2) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the PFD that would be obtained under assumed free-space propagation conditions. As shown in Figure 6 below, the PFDs at the Earth's surface produced by the satellite data and telemetry transmissions satisfy the PFD limits in the ITU Radio Regulations for all angles of arrival. In addition, the transmit power for the TT&C data transmitters is adjustable on orbit. This capability supports SpaceX's ability to manage the satellites' PFD levels during all phases of the mission. Note these calculations are done for the worst case occupied bandwidth. Also, calculations conservatively assume that the signals from the two omnidirectional antennas on satellite add up in phase at the surface of the Earth and the gain of both antennas is +3dB.

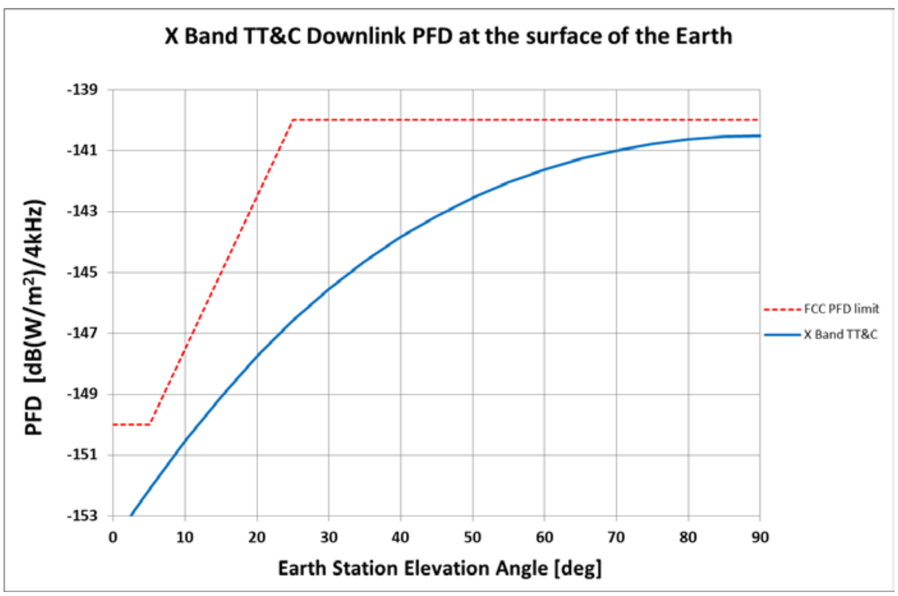


Figure 6. **PFD at the surface of the Earth produced by the satellite telemetry downlinks**

4. Power Flux Density at the Geostationary Satellite Orbit (X-Band)

ITU Radio Regulations No. 22.5 specifies that in the frequency band 8025-8400 MHz, which the EESS using non-geostationary satellites shares with the fixed-satellite service (Earth-to-space) or the meteorological-satellite service (Earth-to-space), the maximum PFD produced at the geostationary satellite orbit ("GSO") by any EESS space station shall not exceed –174 dB(W/m^2) in any 4 kHz band. The calculation below shows that the PFD produced by the transmissions from the proposed satellite does not exceed the limit in No. 22.5, even in the worst possible hypothetical case.

The calculations for the PFD at the GSO produced by the satellite transmission are shown in Figure 7 below. Note these calculations are done for the worst case occupied bandwidth. Also, calculations conservatively assume that the signals from the two omnidirectional antennas on satellite add up in phase at the GSO and the gain of both antennas is +3dB (for an equivalent total gain of 6dB).

Occupied Bandwidth [MHz]	2.90
Amplifier Output Power [W]	20.00
Amplifier Output Power [dBW]	13.01
Tx out circuit loss [dB]	1.00
Tx Antenna Gain [dBi]	3.00
EIRP [dBW]	15.01
EIRP density [dBW/Hz]	-49.61
EIRP in 4kHz [dBW]	-13.59
Min Distance to GSO [km]	35161.00
Spreading Loss [dB]	-161.91
PFD [dB(W/m^2)]	-175.51

Figure 7. **PFD at the GSO produced by the satellite Telemetry Downlinks**

5. Interference Notes

5.1 Interference with the GSO Fixed Satellite Service (FSS) in the band 10.95-11.05 GHz

In the Ku downlink band (10.95 – 11.05 GHz), MicroSat will implement GEO arc avoidance to protect from interference into GSO ground terminals. This will be accomplished by reducing Ku transmit power and, in some cases, cessation of Ku downlink emissions. Compliance with epfd is ensured as follows:

1) Turn off the transmit beam on satellite whenever $\phi < 12°$. ϕ is the angle between the boresight of a GSO Earth station (assumed to be collocated with the SpaceX Earth Station) and the direction of the SpaceX satellite transmit beam. This ensures the -160dB(W/m^2)/40kHz limit is never exceeded.

2) The sidelobes of the antenna patterns are at least 30dB down. This ensures that a sidelobe that happens to align with the boresight of the GSO receive station will not cause EPFD exceeding -160dB(W/m^2)/40kHz.

3) Because the transmit power is adjustable on orbit, SpaceX has the ability to manage the satellite's $EPFD_{down}$ levels during all phases of the mission, as needed.

5.2 Interference with the GSO Uplinks in the band 2025-2100 MHz

In the S-band uplink (2025 – 2100 MHz), MicroSat will implement GEO arc avoidance to protect from interference into GSO satellites. This will be accomplished by reducing S-band transmit power and, in some cases, cessation of S-band uplink emissions to assure compliance with the e.i.r.p. limits specified in the ITU Radio Regulations No. 21.2 & 21.4.

5.3 Interference between EESS systems operating in the band 8025-8400 MHz

Interference between the SpaceX satellites and those of other systems is very unlikely because EESS systems operating in the 8025-8400 MHz band normally transmit only in short periods of time while visible from the dedicated receiving earth stations. For the interference to happen, satellites belonging to different systems would have to travel through the antenna beam of the receiving earth station and transmit at the same time. In such a very unlikely event, the interference can be still be avoided by coordinating the satellite transmissions so that they do not occur simultaneously.

5.4 Interference with the Fixed Service and the FSS in the band 8025-8400 MHz

The SpaceX satellite transmissions will meet the limits specified by the ITU for protection of the Fixed Service in the 8025-8400 MHz band, as well as the geostationary FSS satellites using this band for their uplinks.