Exhibit

The MITRE Corporation ("MITRE") seeks a 30 day extension of a special temporary authorization ("STA") (Call Sign: WK2XPQ) to operate an M2 Antenna Systems Yagi antenna (the "400 MHz Yagi") at a site in Bedford, MA.

As noted in the original MITRE STA application, the 400 MHz Yagi will communicate with Analytical Space, Inc.'s ("ASI's") Meshbed experimental cubesat ("Meshbed Satellite") to attempt tracking, telemetry and command ("TT&C") in order to recover housekeeping, orientation, and subsystem control of the Meshbed Satellite in the 401.24-401.36 MHz band (Earth-to-space/space-to-Earth).

Further, as described in the original MITRE STA application, the ASI Meshbed Satellite operates under an experimental authorization from the Commission and carries an experimental antenna payload built by MITRE.[1] The Meshbed Satellite was launched on November 27, 2019. Since launch, ASI has failed to make contact with the Meshbed Satellite through use of the primary TT&C ground station operated by RBC Signals in Windham, NY.[2] ASI filed for another STA to include use of a second ground station to supplement TT&C services at Deadhorse, AK, also operated by RBC Signals,[3] but to date no contact has been made with the Meshbed Satellite using the Deadhorse earth station. MITRE is told that ASI believes that the antenna onboard the Meshbed Satellite used for TT&C partially deployed or did not deploy at all. MITRE is told that ASI believes that through use of a higher power transmitter, it may be possible to get a signal to the TT&C antenna to tell it to continue deploying the TT&C antenna.

To assist in recovering control of the Meshbed Satellite, MITRE is requesting an emergency TT&C authorization to utilize the 400 MHz Yagi at the MITRE facility in Bedford, MA. The Bedford location will operate at a higher transmit power than the Deadhorse and Windham sites in support of Meshbed Satellite recovery. Once control of the Meshbed Satellite is achieved, TT&C will be conducted from only the Windham earth station as originally planned. MITRE does not seek permanent authority to conduct TT&C for the Meshbed Satellite from the Bedford earth station. The Deadhorse and Windham sites are part of a third-party ground station network that Analytical Space has access to through a ground-station-as-a-service type contract. They are shared assets between multiple satellite operators. They do not have the physical equipment nor the authority to transmit at the power levels required to recover from several potential failure modes.

Power

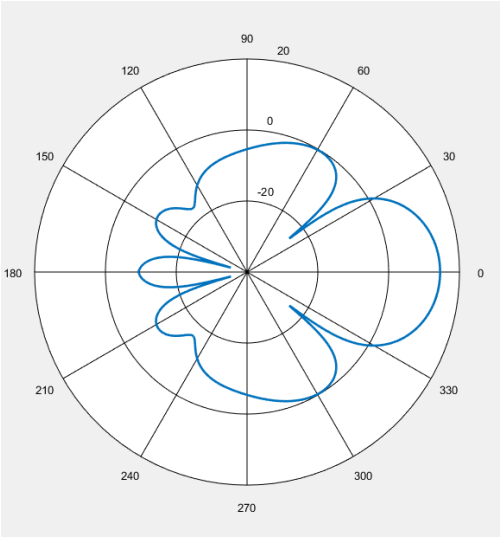
The EIRP that MITRE proposes to use for this STA (36.2 dBW) is 9 dB higher than the power that was authorized in the original TT&C earth station authorizations. Based on the satellite pass times, MITRE will need to transmit for approximately 10 minutes up to 3 times per day.

[1] ELS File No. 1560-EX-ST-2019.
[2] IBFS File Nos. SES-STA-20180816-02235 and SES-STA-20191121-01543.
[3] IBFS File Nos. SES-STA-20191127-01599 and SES-STA-20200107-00013.

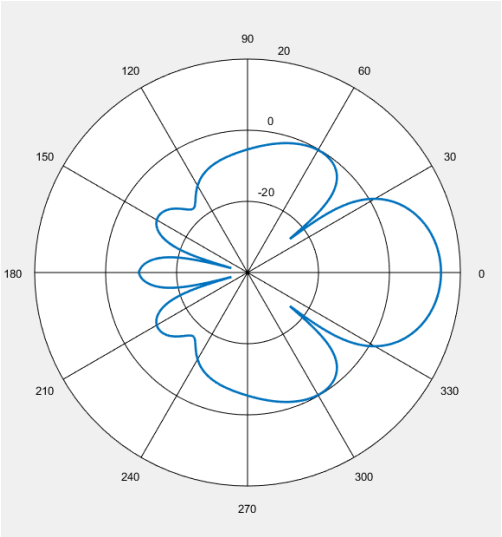
Directional Antenna Information

The antenna will be mounted to a positioner programmed to track a low-earth orbit (LEO) satellite. The beam orientation for the antenna will be greater than ten (10) degrees above the horizon (elevation) and can rotate 360 degrees in azimuth.

The beam pattern for the antenna is shown below. The half-power beam width is approximately 30 degrees. The main beam gain is 16.2 dBi.



Horizontal



Vertical

RadHaz

The Maximum Permissible Exposure ("MPE") limit at 401.3 MHz is given by MPE = f/300, where f is frequency in MHz (see 47 C.F.R. § 1.1310). Thus the limit is 401.3/1500 = 0.267 mW/cm^2.

The EIRP of the transmitting station will be 4167.19 Watts (ERP = 2540.97 Watts).

The safe distance is calculated using the formula below:

$$limit\ \left(\frac{mW}{cm^2}\right) = \frac{EIRP\ (mW)}{4\pi d^2}$$

$$0.267\ \frac{mW}{cm^2} = \frac{4167.19\ x\ 10^3\ mW}{4\pi d^2}$$

$$d = 1115\ cm = 11.2\ meters$$

Accordingly, MITRE will ensure that nobody is able to approach closer than 12 meters to the antenna while the station is operating.

Stop Buzzer Contact

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