

**EXHIBIT 1.  
DESCRIPTION OF OPERATIONS.**

Applicant holds a letter of intent authorization to operate a 2 GHz satellite known as TerreStar-1.<sup>1</sup> Additionally, Applicant holds a license to operate a gateway earth station, consisting of two fixed satellite service (“FSS”) antennas that are located in North Las Vegas, Nevada, that will communicate with TerreStar-1 using feeder link frequencies.<sup>2</sup> The TerreStar-1 satellite is currently scheduled to be launched on June 24, 2009.

During a pre-launch test activity that was recently conducted at the North Las Vegas gateway facility, two High-Power Amplifiers (HPA) in the RF facility failed. The failed HPAs have been sent back to the manufacturer for analysis and possible repair. However, because of the imminent need to support the coming launch and Satellite In-Orbit-Testing (IOT) activity, TerreStar cannot wait for either the repaired units or the new units to arrive. Instead, two off-shelf spare HPAs are now being installed at the facility. These replacement HPAs need to be tested and their technical parameters characterized prior to satellite launch.

In this filing, Applicant seeks authority to operate the 9.3m antenna facility in North Las Vegas, in accordance with the parameters specified herein, in order to test the performance of the replacement HPAs and associated electronics prior to the launch of TerreStar-1.<sup>3</sup> During these operations, the antennas will be pointed at 111.0° W.L., which will be the orbital location for TerreStar-1 after it is launched.

Because Applicant requires only three days in which to test its antennas, Special Temporary Authority (“STA”) is most appropriate for this purpose. A test period of June 4, 2009 to June 6, 2009 has been selected to accommodate the schedules of multiple vendors that will participate in the testing.

The 12.75-13.25 GHz band for which Applicant is seeking STA is shared between the FSS and terrestrial services. Applicant’s proposed operations provide appropriate protection to all relevant parties.

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<sup>1</sup> See Order, DA 07-2028 (Int’l Bur., May 10, 2007); *TMI Communications and Company, Limited Partnership*, Order, 16 FCC Rcd 13808 (Int’l Bur. 2001); *TMI Communications and Company, Limited Partnership, and TerreStar Networks, Inc. Application for Review and Request for Stay*, Memorandum Opinion and Order, 19 FCC Rcd 12603 (2004).

<sup>2</sup> See File Nos. SES-LIC-20070530-00732 and SES-AMD-20071130-01642.

<sup>3</sup> The parameters proposed herein are similar to those used to test the gateway earth station last year pursuant to an experimental STA, See FCC File No. 0407-EX-ST-2008. The test last year was limited to the 12.75-13.00 GHz portion of 12.75-13.25 GHz band, but has been expanded here to the full 12.75-13.25 GHz band.

First, in its application for a gateway earth station license, which is cited above, Applicant provided copies of coordination reports from Comsearch evidencing coordination with the operators of terrestrial stations in the band.

Second, for purposes of the tests proposed in this STA request, Applicant will in some cases operate with power levels exceeding the power levels that already had been coordinated in connection with Applicant's gateway earth station application. In addition, Applicant will access, on a limited and short-duration basis, the 13.0-13.25 GHz band which is adjacent to the 12.75-13.0 GHz band already licensed. Accordingly, Applicant has coordinated the higher-power and adjacent band test operations with the operators of terrestrial stations in the band. Copies of the Comsearch reports evidencing this coordination are included with this STA request.

The characteristics of the test signals and the frequencies they will access are detailed in Tables 1 and 2 herein attached with this STA request. The higher-power 80 dBW test signal is expected to be short in duration (estimated 1 minute or less).

Finally, TerreStar has coordinated with SkyTerra (Canada) Inc. ("SkyTerra"), which transmits in the 13.0 to 13.25 GHz band from its assigned 106.5° W.L. orbital position, the parameters to be used in the tests proposed in this STA request. Applicant and SkyTerra have agreed in principle that the technical parameters specified herein should not cause unacceptable interference into the adjacent 13.0 to 13.25 GHz band licensed to SkyTerra. As an added precaution, TerreStar has agreed to notify SkyTerra when it is ready to transmit in the 12.75 to 13.25 GHz band so SkyTerra can monitor the performance of its traffic in the unlikely event unacceptable interference occurs. SkyTerra is the only satellite operator using the 12.75 to 13.25 GHz band covered by this filing and operating a satellite located in the vicinity of 111.0° W.L.

**Table 1. North Las Vegas HPA Retest Signal Characteristics**

|               | <b>Bandwidth<br/>Used</b> | <b>Ku-band<br/>Transmit<br/>EIRP from<br/>NLV (in dBW)</b> | <b>Ku-band<br/>Frequency (in<br/>MHz)</b> |
|---------------|---------------------------|--|---|
| Test Signal 1 | CW                        | 80   | (see Table 2)                             |
| Test Signal 2 | 10 MHz swept<br>CW        | 62   | 12750-13250                               |
| Test Signal 3 | 5 MHz                     | 62   | 12750-13000                               |

**Table 2. Ku-band Frequencies for North Las Vegas HPA Retest**

| <b>Element No.</b> | <b>Frequency</b> |     | <b>Element No.</b> | <b>Frequency</b> |     |
|--------------------|------------------|-----|--------------------|------------------|-----|
| 1                  | 12764.9          | MHz | 1                  | 13008.609        | MHz |
| 2                  | 12771.9          | MHz | 2                  | 13015.609        | MHz |
| 3                  | 12778.9          | MHz | 3                  | 13022.609        | MHz |
| 4                  | 12785.9          | MHz | 4                  | 13029.609        | MHz |
| 5                  | 12792.9          | MHz | 5                  | 13036.609        | MHz |
| 6                  | 12799.9          | MHz | 6                  | 13043.609        | MHz |
| 7                  | 12806.9          | MHz | 7                  | 13050.609        | MHz |
| 8                  | 12813.9          | MHz | 8                  | 13057.609        | MHz |
| 9                  | 12820.9          | MHz | 9                  | 13064.609        | MHz |
| 10                 | 12827.9          | MHz | 10                 | 13071.609        | MHz |
| 11                 | 12834.9          | MHz | 11                 | 13078.609        | MHz |
| 12                 | 12841.9          | MHz | 12                 | 13085.609        | MHz |
| 13                 | 12848.9          | MHz | 13                 | 13092.609        | MHz |
| 14                 | 12855.9          | MHz | 14                 | 13099.609        | MHz |
| 15                 | 12862.9          | MHz | 15                 | 13106.609        | MHz |
| 16                 | 12869.9          | MHz | 16                 | 13113.609        | MHz |
| 17                 | 12876.9          | MHz | 17                 | 13120.609        | MHz |
| 18                 | 12883.9          | MHz | 18                 | 13127.609        | MHz |
| 19                 | 12890.9          | MHz | 19                 | 13134.609        | MHz |
| 20                 | 12897.9          | MHz | 20                 | 13141.609        | MHz |
| 21                 | 12904.9          | MHz | 21                 | 13148.609        | MHz |
| 22                 | 12911.9          | MHz | 22                 | 13155.609        | MHz |
| 23                 | 12918.9          | MHz | 23                 | 13162.609        | MHz |
| 24                 | 12925.9          | MHz | 24                 | 13169.609        | MHz |
| 25                 | 12932.9          | MHz | 25                 | 13176.609        | MHz |
| 26                 | 12939.9          | MHz | 26                 | 13183.609        | MHz |
| 27                 | 12946.9          | MHz | 27                 | 13190.609        | MHz |
| 28                 | 12953.9          | MHz | 28                 | 13197.609        | MHz |
| 29                 | 12960.9          | MHz | 29                 | 13204.609        | MHz |
| 30                 | 12967.9          | MHz | 30                 | 13211.609        | MHz |
| 31                 | 12974.9          | MHz | 31                 | 13218.609        | MHz |
| 32                 | 12981.9          | MHz | 32                 | 13225.609        | MHz |