Marlink, Inc.

Application for Modification of WB36 License to Authorize Increase in Power to the Antenna Flange and New Associated Specifications and Emission Designators for up to 500 Thrane & Thrane Model TT7080A "Sailor 800A" 0.83 Meter Ku-Band Antennas, 500 Intellian Model "V150NX" 1.50 Meter Ku-Band Antennas and 500 Intellian Model "V85NX" 0.85 Meter Ku-Band Antennas And Add Authorization for up to 500 Intellian Model "V80e" 0.80 Meter Ku-band Antennas, 500 Intellian Model "V100NX" 1.05 Meter Ku-band Antennas, 500 Intellian Model "V130NX" 1.25 Meter Ku-band Antennas, 500 Intellian Model "V240MTKu" 2.4 Meter Ku-band Antennas, 500 Intellian Model "V240MTKa" 2.4 Meter Ka-band Antennas, 500 Intellian Model "V240MT Gen2Ku" 2.4 Meter Ku-band Antennas, 500 Intellian Model "V240MT Gen2Ka" 2.4 Meter Ka-band Antennas, 500 SeaTel Model "2400Ku" 2.4 Meter Ku-band Antennas and 500 SeaTel Model "2400Ka" 2.4 Meter Ka-band Antennas to the WB36 Authorization for Earth Stations on Vessels (ESV),

SES-MOD-20171011-01136

Call Sign WB36

I) Request to Authorize Increase in the Power to the Antenna Flange and New Associated Specifications and Emission Designators for up to 500 Thrane & Thrane TT7080A Sailor 800A (new Antenna ID TTSA80020W) 0.83 Meter Ku-Band, 500 Intellian V150 (new Antenna ID V150-NX) 1.50 Meter Ku-Band and 500 Intellian V85 (new Antenna ID V85-NX) 0.85 Meter Ku-Band Antennas.

Marlink is requesting authorization of an increase in the "Maximum Total Input Power at Antenna Flange" and "Maximum Aggregate Output EIRP for all Carriers" and new Emission Designators for the above listed antennas which are currently authorized by the WB36 license. As agreed in discussions with Commission Staff Marlink requests that these authorizations be accomplished by adding to the license as set forth in the Schedule B new "Antenna IDs" and associated specifications for "Particulars of Operation", "Frequency Coordination" and "Antenna Facilities" for each new Antenna ID. Thus, no changes will be required to any specifications currently listed in the license. Only additions to the license will be required.

New Radiation Hazard Reports for these antennas for the powers set forth in the Schedule B are included in the Radiation Hazard Report Exhibit which is being submitted with the application. As it has been previously established that the antennas comply with all Commission regulations for ESV antennas and identical versions of same are currently authorized by the WB36 license it is respectfully requested that the manufacturer's certifications, plots and tables which were submitted with the prior Modification Applications for authorization of those antennas be hereby incorporated by reference and no new manufacturer's certifications or plots and tables for these antennas are being submitted with this application.

II) Request to Add Authorization for up to 500 Intellian Model "V80e" 0.80 Meter Ku-band Antennas, 500 Intellian Model "V100NX" 1.05 Meter Ku-band Antennas, 500 Intellian Model "V130NX" 1.25 Meter Ku-band Antennas, 500 Intellian Model "V240MTKu" 2.4 Meter Ku-band Antennas, 500 Intellian Model "V240MTKa" 2.4 Meter Ka-band Antennas, 500 Intellian Model "V240MTGen2Ku" 2.4 Meter Ku-band Antennas, 500 Intellian Model "V240MTGen2Ka" 2.4 Meter Ku-band Antennas, 500 Intellian Model "V240MTGen2Ka" 2.4 Meter Ka-band Antennas, 500 SeaTel Model "2400Ku" 2.4 Meter Ku-band Antennas and 500 SeaTel Model "2400Ka" 2.4 Meter Ku-band Antennas

Marlink requests that authorization for the above listed new ESV remote antennas be added to the WB36 license.

All the remote ESVs – both the currently authorized antennas listed in Section I which are being updated and the new antennas which are being added to the authorization per this section II - will be located on vessels traveling in U.S. and international waters. They will operate with hub antennas that are separately licensed. They will be utilized to provide ESV service in the same manner as previously authorized by the Commission and will be operated in full compliance with the requirements of the Commission's Earth Station in Motion (ESIM) and ESV regulations as set forth in §25.228 and otherwise of the Rules.

Marlink's compliance with the application requirements for authorization of these earth stations follows herewith, and the required exhibits are included as attachments to the Modification Application.

Compliance with Application Requirements

§25.115

(a)(1) Application filed electronically through the International Bureau Filing System and all information specified in this section is either included in the Main Form and Schedule B or follows below.

(a)(2)-(4) Not applicable.

(a)(5) See Exhibit 2 – "Informative Attachment"

(a)(6)-(10) Not applicable.

(b) Not applicable.

(c)(1) Form 312 submitted and Schedule B completed as appropriate for the TTSA80020W, V150NX, V85NX, V80e, V100NX, V130NX, V240MTKu, V240MTGen2Ku and 2400Ku Ku-band antennas.

(c)(1)(i) All the above listed Ku-band antennas comply with §25.218(f). The manufacturers' certifications on this for the antennas currently authorized by the license – TTSA80020W, INTV150NX and INTV85NX antennas - were submitted with the prior Modification Applications for authorization of those antennas and are hereby incorporated by reference. The manufacturers' certifications on this for the antennas for which new authorization is being requested - V80e, V100NX, V130NX, INTV240MTKu, INTV240MTGen2Ku and 2400Ku - are in Exhibit 4.

(c)(2) Not applicable.

(c)(3)(i) Form 312 submitted and Schedule B completed for the V240MTKa, V240MTGen2Ka and 2400Ka Ka-band antennas. As established in the following two paragraphs, each of the antennas meet the criteria of either paragraphs (c)(3)(i)(A) or¹ (B).

(c)(3)(i)(A) Exhibit 4 contains the certification for the 2400Ka antenna pursuant to \$25.132(a)(1) that the off-axis gain of the antenna will not exceed the relevant levels specified in \$25.209(a) and (b) and that the power spectral density of any digitally modulated carrier into any transmitting Ka-band earth station antenna in the network will not exceed 3.5 dBW/MHz as specified in \$25.212(e).

(c)(3)(i)(B) Exhibit 5B contains the plots and tables specified in (g)(1) that indicate that the off-axis EIRP density from the V240MTKa and V240MTGen2Ka antennas will not exceed relevant routine levels specified in §25.218(i).

(d)(e) & (f) Not applicable.

(g) Exhibits 5A and 5B contain the plots and tables specified in (g)(1) for the V80e, V100NX, V240MTKu, V240MTGen2Ku, V240MTKa, V240MTGen2Ka and 2400Ku antennas. The plots and tables submitted with the prior Modification

¹ Applicant notes that \$25.115(c)(3)(i) states that applications covered by the section, "...may be routinely processed if the criteria in paragraphs (c)(3)(i)(A) and (B) of this section are met." However, applicant is requesting a waiver of the "and" in \$25.115(c)(3)(i) and respectfully requesting that the application for authorization of the Ka-band ESV antennas included in this Modification Application be afforded routine processing based on the fact that it is established that the antennas meet the criteria in paragraphs (A) or (B) of \$25.115(c)(3)(i). Please see the Waiver Request exhibit for detailed justification for the waiver.

Applications for those antennas currently authorized by the license – TTSA80020W, INTV150NX and INTV85NX - are respectfully hereby incorporated by reference. Exhibit 4 contains the certifications as per (g)(2) for the 2400Ka and V130NX antennas.

(h)(i) & (j) Not applicable.

(k)(1) The antennas which are the subject of this Modification Application meet the requirements of this paragraph, (m)(1) and (n)(1) and the Permitted Space Station List is being designated as a point of communication.

(k)(2) Noted and will comply.

(l) Not applicable.

(m)(1) The satisfactory completion of necessary frequency coordination is established in the Frequency Coordination Exhibit. As described above, the relevant information specified by paragraph (g) of this section is included in Exhibits 4 and 5A and manufacturers' certifications that the antennas comply with §25.218(f) are in Exhibit 4. The certification required by §25.218(f)(4) for ESIMs operating in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam is contained in Exhibit 4.

(m)(2) Not applicable.

(m)(3)(i) The Marlink system is designed so that relevant off-axis EIRP density limits will only be exceeded if there is a pointing error in which the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°. The manufacturers' certifications, which are in Exhibit 4, certify that the antennas will maintain a pointing error of less than or equal to 0.2 degrees under specified ship motion conditions and will automatically cease the transmission with a mute command to the modem within 100 milliseconds if the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5 degree and will not resume until such angle is less than or equal to 0.2 degree. The certification required for variable-power ESIM applicants that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving a command to do so from the system's network control and monitoring center, if the aggregate off axis EIRP densities of the transmitter or transmitters exceed the relevant off-axis EIRP density limits is contained in 4.

(m)(3)(ii) See Area of Operations Exhibit.

(m)(3)(iii) The U.S. based ESV Compliance Officer has authority and ability to cease all emissions from ESVs through teleports located in the U.S. used to uplink the ESVs. The ESV Compliance Officer is authorized to direct the Marlink Network

Operations Center (MNOC) located in Eik, Norway to send commands via the uplink teleports to cause the remote ESVs to cease transmitting. The business address for the ESV Compliance Officer is 11707 S Sam Houston Parkway West, Suite A, Houston, Texas, 77031 and this point of contact is available 24 hours a day, seven days a week via 346-223-0396 which is the U.S. number for the MNOC.

(m)(3)(iv) See Radiation Hazard Exhibit.

(n)(1) As further explained in the Frequency Coordination Exhibit Marlink will not utilize any frequencies for which coordination is required without first completing the necessary coordination. The manufacturers' certifications that the antennas comply with §25.218(i) is in Exhibit 4. The relevant information specified by paragraph (g) of this section is in Exhibit 5B. The certification required by §25.218(i)(5) for ESIMs operating in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam is contained in Exhibit 4.

(n)(2) Not applicable.

(n)(3)(i) The Marlink system is designed so that relevant off-axis EIRP density limits will only be exceeded if there is a pointing error in which the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°. The manufacturers' certifications, which are in Exhibit 4, certify that the antennas will maintain a pointing error of less than or equal to 0.2 degree under specified ship motion conditions and will automatically cease the transmission with a mute command to the modem within 100 milliseconds if the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5 degree and will not resume until such angle is less than or equal to 0.2 degree. The certification required for variable-power ESIM applicants that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving a command to do so from the system's network control and monitoring center, if the aggregate off axis EIRP densities of the transmitter or transmitters exceed the relevant off-axis EIRP density limits is contained in Exhibit 4.

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(n)(3)(iv) See Radiation Hazard Exhibit.