

**APPLICATION REQUIREMENTS UNDER SECTIONS 25.114 AND 25.137 OF THE RULES FOR
EARTH STATIONS OPERATING WITH NON-U.S. LICENSED SPACE STATIONS
(AMONG OTHER WAIVER REQUESTS AND CONSIDERATIONS)**

By this application (“Application”), SSC Space US, Inc. d/b/a Universal Space Network, Inc. (“USN”), a Delaware corporation, seeks FCC approval for a new earth station license for a facility in North Pole, Alaska (the “Earth Station”) that proposes to include a non-U.S. licensed space station system (“FalconEye”) as a point of communication. Specifically, USN proposes to provide Telemetry, Tracking and Command (“TT&C”) capabilities from the Earth Station, as well as other earth stations outside the United States, for FalconEye.¹

FalconEye, which is not owned by USN, is a non-geostationary satellite system of up to two non-geostationary satellites² that (i) intend to provide Earth Exploration/Observation Satellite Services (“EESS”); and (ii) is owned and operated by the government of United Arab Emirates (“UAE” or the “Owner”), a member of the World Trade Organization.³ To be clear, the Satellite does not intend to use any spectrum to downlink its data within the United States; through this application (the “Application”), USN proposes to provide only TT&C services to the Satellite. To this end, the only frequencies that are the focus of this Application are those to be used for TT&C. In addition, USN is currently providing TT&C services through the Earth Station to the Satellite pursuant to a recent grant of special temporary authority that enables the Earth

¹ The Commission classifies TT&C as a space operation service, which is “a radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry, and space telecommand.” 47 CFR § 2.1; ITU R.R. 1.23. These three operations commonly continue to be referred to as “TT&C.”

² The proposed FalconEye spacecraft system was to consist of two satellites but the launch of the first satellite was not successful. A second satellite (the “Satellite”) was successfully launched on December 1, 2020, after a short delay from its scheduled launch date in late November 2020.

³ See, e.g., https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (showing UAE as WTO member since April 1996) (last viewed December 14, 2020). Consistent with Section 2.1 of the Commission’s Rules, EESS includes any radiocommunication service between earth stations and one or more space stations, in which “information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from active sensors or passive sensors on Earth satellites,” among other matters, and is typically deemed to include remote-imaging services. The Satellite is equipped with an optical imaging payload for possible commercial and military applications. (Per a recent Arianespace statement, the FalconEye satellite “will have a dual mission: support the needs of UAE Armed Forces and provide commercial imagery for the market.” See <https://www.arianespace.com/mission/soyuz-flight-vs24/> (last viewed Dec. 14, 2020).

Station to support the Satellite for a period following the Satellite's launch.⁴ Accordingly, the license applied for herein will simply extend the period of support able to be provide the Satellite and thus should be deemed to remain consistent with the public interest, as further set forth herein. Moreover, to the extent necessary to provide TT&C service from a U.S.-based earth station to a non-U.S. space station, this Application provides additional information regarding the Satellite.

I. BACKGROUND AND WAIVER REQUEST

USN is a long-time provider of TT&C and other capabilities for a diverse group of spacecraft. For example, USN, with its parent company, Swedish Space Corporation ("SSC"), has provided earth station services to many space operations of the U.S. National Air and Space Administration ("NASA"), through its facilities in Hawaii, Alaska, and other locations around the world.⁵ Over the past two decades, these services have included support for more than 20 Near Earth Network ("NEN") missions using frequencies in the S- and X-band, with additional missions expected.

For these or similar purposes, USN has held a number of temporary or other authorizations from the Federal Communications Commission for earth station operations, including the Earth Station.⁶ For example, in August 2019, the Commission approved a request for special temporary authority to enable USN to provide low-earth orbit (LEO) and geo-transfer orbit TT&C support for the European Data Relay Satellite ("EDRS-C") from USN's Hawaii earth station.⁷ USN also has held permanent authorizations from the Commission for other operations, including TT&C and EESS operations.⁸

A number of these authorizations have included waivers of certain Commission rules. Per Section 1.3 of the Commission's Rules, the Commission may grant a waiver for good cause

⁴ See FCC File No. SES-STA-20201106-01227 (the "STA"). The current STA is to expire in January 2021. However, USN expects to request to extend that STA in a submission contemporaneous with or shortly following the submission of this Application.

⁵ See, e.g., <https://www.nasa.gov/directorates/heo/scan/services/networks/nen> (last viewed on December 14, 2020).

⁶ See, e.g., FCC File Nos. SES-STA-20180305-00189; SES-STA-20180220-00153, SES-STA-20171204-01297, SES-STA-20170131-00105, & SES-STA-20161206-00933.

⁷ See, e.g., FCC File No. SES-STA-20190611-007 (granting temporary authorization to support TT&C operations for the European-licensed EDRS-C).

⁸ See, e.g., FCC File No. SES-MOD-20180424-00394 (adding point of contact and new frequencies to services provided to GEOEYE-1).

shown.⁹ Among other circumstances, good cause exists if “special circumstances warrant a deviation from the general rule and such deviation will serve the public interest” better than adherence to the general rule.¹⁰ Under that long-established principle, the Commission has waived several earth station requirements in cases in which USN intends to provide only limited earth-station services and/or when USN is serving a non-U.S. licensed satellite that it does not own.¹¹

Similarly, though the Commission may typically require an extensive showing before authorizing an earth station to provide services to a non-U.S. licensed space station that has not been previously authorized within the United States,¹² the nature of the services to be provided in this case justifies waivers of some or all of Sections 25.114 and 25.137 of the Commission’s Rules. First, USN is currently proposing to provide only TT&C services through the Earth Station.¹³ For technical and practical reasons, including a reduced likelihood of interference and the public safety benefits inherent to TT&C services, the limited nature of TT&C services justifies a less extensive review of the proposed earth station’s services to non-U.S. satellites. Second, neither USN nor any corporate parent, affiliate or subsidiary of USN

⁹ 47 C.F.R. §1.3.

¹⁰ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990); see *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

¹¹ See, e.g., FCC File No. SES-STA-20190611-007 (granting temporary authorization to support TT&C operations for the European-licensed EDRS-C).

¹² See *Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, Report and Order, 12 FCC Rcd 24094 (1997) (“DISCO II Order”).

¹³ See, e.g., *U.S. Electrodynamics, Inc.*, Order and Authorization, File Nos. SES-LIC-1999021200165, et al., (IB rel. June 24, 1999) (approving five earth stations to provide TT&C to mobile satellite system pursuant to authority of the United Kingdom without extensive DISCO II showing). Currently, any downlinking of data from the Satellite is expected to occur through earth stations outside the United States. In addition, some or all of these non-U.S. earth stations also may provide TT&C services to the Satellite. Technical information is being provided in this application only for the frequency bands for which authority is being sought to serve the United States: to wit, the S-band frequencies specified for TT&C. See, e.g., *Telesat Canada*, IBFS File No. SAT-PPL-200605016-00061, at 1 n.2 (filed May 16, 2006; granted Jan. 18, 2007); see also *Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, Report and Order, 15 FCC Rcd 16127 (¶ 86) (2000) (clarifying that market access application requirements apply only to relevant system capabilities for communications to or from the United States, and not to system capabilities for communications wholly outside of the United States).

owns or controls the Satellite, which will be controlled by the Owner. Because USN does not own the Satellite, it should not be expected or required to provide information that generally would be available only from the owner or operator of the Satellite.

Nonetheless, in order to facilitate Commission review of the proposed Earth Station services, and to the extent the Owner has provided USN information relevant to Sections 25.114 and 25.137 of the Commission's Rules, USN also is respectfully submitting materials that further address Sections 25.114 and 25.137 requirements for earth stations operating with non-U.S. licensed space stations, including:

- Section II of this exhibit addresses demonstrates that TT&C by the Satellite in the United States is consistent with the policies underlying the Commission's *DISCO II Order*.¹⁴
- Section III provides legal and technical information, respectively, for the Satellite pursuant to Part 25 of the Commission's Rules.
- Section IV addresses certain application processing issues and requests that the Commission grant this application on a timely basis.
- Section V summarizes several public interest considerations supporting grant of this application.

In addition, attached separately to this Application is the Satellite's Orbital Debris Mitigation Plan (dated October 2020), which includes additional technical information from the party that constructed the Satellite.

II. *DISCO II ANALYSIS*

The Commission considers requests by earth station licensees to communicate with non-U.S. licensed satellites pursuant to several factors established in the *DISCO II Order*, including the effect on competition in the United States, eligibility and operating requirements, spectrum availability, and national security concerns.¹⁵ As part of *DISCO II*, the Commission adopted an open-entry standard for applicants seeking to access satellite systems licensed by World Trade Organization ("WTO") Members to provide satellite services covered by the U.S. commitments under the WTO Basic Telecom Agreement. Accordingly, the Commission

¹⁴ See *Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, Report and Order, 12 FCC Rcd 24094 (1997) ("*DISCO II Order*").

¹⁵ See, e.g., *Space Imaging, LLC*, Declaratory Order and Order and Authorization, 20 FCC Rcd 11964 (¶¶ 13-14) (IB 2005) ("*Space Imaging Order*").

established a rebuttable presumption that entry of satellite systems licensed by WTO Members providing WTO-covered services will promote competition.¹⁶

Permitting the Earth Station to provide TT&C to the Satellite satisfies applicable Commission's *DISCO II* requirements. First, the Satellite has been authorized by the United Arab Emirates, which is U.S. ally and a WTO member.¹⁷ Second, the United States did not exclude EESS, Space Operations or TT&C from its commitments under the WTO Basic Telecom Agreement.¹⁸ Thus, the *DISCO II Order's* presumption in favor of entry should apply to the provision of TT&C services by the Earth Station to the Satellite. Third, the proposed use will contribute to the diversification of the client base of U.S.-located earth station facilities, which directly assists U.S. companies like USN. By increasing the available customers of U.S.-based earth stations, the proposed service will foster competition and new services within the United States. In addition, the proposed authorization will benefit and support increased operations of the relevant Earth Station itself, which previously has been limited to temporary or government operations. Fourth, the proposed operations will assist with greater safety in space operations generally by providing additional redundancy for the Satellite's TT&C functions. Fifth, the proposed technical operations intend to be consistent with Commission's requirements or appropriate waivers, as set forth below. Sixth, the required spectrum use within the United States will be limited, and appropriate for TT&C use as, again, further set forth below. Finally, the proposed Satellite or Earth Station operations should not pose any national security, law enforcement, foreign policy, or trade concerns.¹⁹

III. LEGAL AND TECHNICAL INFORMATION

Section 25.137(b) of the rules requires earth station applicants proposing to operate with non-U.S. licensed space stations to provide legal information for the non-licensed satellite

¹⁶ See *DISCO II Order*, 12 FCC Rcd at 24112 (¶ 39).

¹⁷ See https://www.wto.org/english/thewto_e/whatis_e/tif_e/orq6_e.htm (listing UAE as a WTO member since April 1996) (last viewed on December 14, 2020).

¹⁸ As a general matter, U.S. commitments under the WTO Basic Telecom Agreement have been understood to include all manner of satellite services except for Direct Broadcast Satellite ("DBS") services, Direct-to-Home ("DTH") services, and Digital Audio Radio Services ("DARS"). See, e.g., *Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, First Order on Reconsideration, 15 FCC Rcd 7207, 7211 (¶ 8) (1999) (noting that ECO-SAT showing is required only for "[a]pplications to provide DTH, DBS, and DARS" for satellite systems from WTO member countries); 47 C.F.R. § 27.137(a). Also, to the extent relevant, EESS has been deemed within the DISCO II presumption. See, e.g., *Space Imaging Order*, 20 FCC Rcd 11964.

¹⁹ See *DISCO II Order*, 12 FCC Rcd at 24169-72 (¶¶ 175-182).

in accordance with Part 25 of the rules. To the extent that rule remains applicable in these circumstances, including the limited provision of TT&C support within the United States, USN provides the following information in response to various Part 25 legal requirements, including information requested in Section 25.114 of the rules and on FCC Form 312.

A. Legal Information

USN submits the following legal information for the owner and operator of the Satellite, including the following information relating to Questions 1-8, 29-34 & 36-42 of the Form 312:

- **Name, Address and Telephone Number.** The Satellite is owned by the government of the United Arab Emirates Armed Forces (“Owner”). The address and telephone number of the Owner are Brig. Pilot Ali Mohammed Alshehhi, SRC UAE AF Commander, with a contact number of +971504877484, and the following address:

Space Reconnaissance Center
ABUDHABI, UAE Armed Forces
Zayed Military City
Al Shahama Gate
- **Regulatory Status.** Owner operates the Satellite on a non-common carrier basis. USN has entered into a long-term contract to provide TT&C to the Satellite through USN’s earth station operations.
- **Basic Qualifications. The answer to each of the basic qualifications Questions 36-39 on FCC Form 312 is “No.”** In response to Question 40, as noted above, the Owner is a UAE governmental entity. The Owner is not subject to denial of Federal benefits for reasons described in Question 41 of FCC Form 312.
- **Coordinating Administration.** The Satellite is authorized by the United Arab Emirates, which is the ITU administration responsible for its operations once achieving its desired orbit. The ITU information relevant to FALCONEYE, based on information provided USN, is ITU API/A/11578 MOD1 29.05.2018 IFIC 2871. For more information regarding laws applicable to the Satellite, please refer to the Orbital Debris Mitigation attachment.
- **Public Interest Considerations.** Public interest considerations supporting grant of this application are noted throughout the application and are summarized in Sections II and V herein.
- **Milestones, Bond and Related Requirements.** The Satellite was launched as of December 1, 2020. Accordingly, USN hereby requests that the Commission waive

any milestone, bond or related requirement, as the launch of the satellite occurred prior to submission of this Application.

B. Technical Information

Section 25.137 of the Commission's rules requires earth station applicants proposing to operate with non-U.S. licensed space stations to provide technical information for the non-U.S. licensed satellite in accordance with Part 25 of the rules. To the extent necessary for the limited services proposed to be provided by the Earth Station, submitted herewith is a Schedule S to FCC Form 312 with information relating to the Satellite as required by Section 25.114(c) of the Commission's Rules. In addition, per Section 25.114(d)(14) of the Commission's Rules, an orbital debris mitigation narrative has been separately attached. Other responses to relevant aspects of Section 25.114(d), including public interest considerations, are included in this narrative exhibit.

- **General Description of the Satellite (Section 25.114(d)(1)).** The Satellite is a non-geostationary satellite orbit ("NGSO") Earth Exploration Satellite Service space station in circular sun-synchronous orbit. The Satellite is designed to support applications such as urban planning, national security, mapping, agriculture and crop monitoring, forestry and disaster management. However, at this time, the Satellite is proposing to use the Earth Station solely for TT&C services within the S-band. Specifically, as set forth in the Orbital Debris Mitigation attachment, the Satellite is projected to have the following parameters:

Cycle length: 25 days

Number of revolutions in cycle: 371

Number of revolutions per day: 14 + 21/25

Eccentricity: $e_0 = 0.00123272$ (frozen orbit)

Altitude (at equator): 610.9 km

Tilt: 97.9256 degrees

Average local time of the descending node: 22:30

- **NGSO Satellite Orbital Information (Section 25.114(c)(6)).** The accompanying Schedule S for the Satellite provides relevant orbital information, including (i) number of space stations and orbital planes; (ii) the inclination of the orbital plane; (iii) the orbital period; (iv) the apogee; (v) the perigee; (vi) the argument of the perigee; (vii) active service arc; and (viii) right ascension of the ascending node.
- **Information as to Radio Frequencies and Related Data (Section 25.114(c)(4)).** The accompanying Schedule S includes information, where applicable, concerning radio frequencies for the proposed uses of the Earth Station. This information does not include data downlink information, however, as no data downlink is currently

proposed to occur within the United States.²⁰

In addition, with respect to the Satellite's proposed transmission and reception modes for its TT&C operations, the Peak Edge Isotropic Antenna Gain is as specified in the technical exhibits, and the polarization is not switchable. For the transmission mode, the input losses are 7 dB, the effective output power is 0.7 watts, and the maximum EIRP is 1.2 dBW. The receiving system also has a system noise temperature of 700 K. Finally, the digital modulation parameters for the digital emission (ID QPSK1) include an emission designator of 235KG1D, an assigned bandwidth of 235.4 kHz, 4 phases, and uncoded data rate of 117.7 kbps, an FEC error correction coding rate of 0.5, and a total C/N performance objective of 4.2 dB. Finally, the Satellite's transmit band has a minimum EIRP of -4.6 dBW, a maximum EIRP of 1.2 dBW, and a maximum power density of -144 dBW/m², with a reference bandwidth of 4 kHz. There will be one carrier per transponder, and each transponder will have a gain of 1 dB.

- **Description of Services to be Provided and Areas Served (Section 25.114(d)(4)).** This narrative and the underlying FCC Form 312 provides a description of the transmission characteristics and performance objectives for the Satellite's service, including earth station parameters. Earth Station operation, which is limited to TT&C use, is expected to involve approximately one to two 10-minute contacts with the Satellite per day for the life of the proposed mission.
- **Antenna Gain Contours (Section 25.114(d)(3)).** See Schedule S.
- **Power Flux Density Levels (Section 25.114(c)(8) & (d)(5).)** See Schedule S.
- **Tracking, Telemetry and Control Arrangements (Section 25.114(c)(9)).** See Schedule S (and as set forth herein). In addition to the Earth Station, and per Section 25.172(a)(2) of the Commission's Rules, the Satellite also expects to use SSC's Kiruna, Sweden facility for TT&C and other purposes. Expected remote control (TT&C) locations also include Abu Dhabi and Al Ain, UAE.
- **Physical Characteristics of the Space Station (Section 25.114(c)(10)).** See Schedule S. In addition to the information provided on Schedule S and in the Debris Mitigation attachment, however, the Satellite has the following parameters:

Mass of Spacecraft without fuel:	1115 kg
Mass of fuel & disposables at launch:	82 kg

²⁰ For the Commission's information, any data downlink is expected to occur at Kiruna, Sweden, and to use 8205.0 MHz.

Mass of spacecraft and fuel at launch:	1197 kg
Deployed area of solar array:	6.5 m ² (total)
Spacecraft Dimensions (L x W x H):	2 m x 2 m x 4 m
Probability of Survival to End of Life:	> 0.94
Spacecraft Electrical Power at End of Life:	553 W (mean) / 1390 W (max)
Depth of Battery Discharge at End of Life:	7% (at Solstice)

- **Orbital Debris Mitigation (Section 25.217(d)).** As noted elsewhere, the Satellite was launched as of December 1, 2020, into an orbit with an altitude of 610.9 km at the equator, and an inclination angle of 97.9256 degrees. Attached to this exhibit is a narrative statement on how the Owner intends to address orbital debris mitigation for the Satellite, including how that mitigation complies with the requirements of Section 25.114(d)(14) as well as the laws of France.
- **Coordination Considerations.** The Satellite has submitted its planned operations with the International Telecommunications Union (“ITU”): SNS 116545113 API/A 11578 IFIC 2821. As detailed below, USN also has undertaken frequency coordination through Comsearch for its TT&C operations.
- **Spectrum Availability, Interference Analysis & Default Service Rules.** In addition to the above materials and the waivers requested, the Commission has not adopted band-specific service rules in Part 25 for EESS NGSO operations in the X-band. Indeed, with respect to downlink services, the Commission routinely has licensed remote-sensing satellite systems in the 8025-8400 MHz frequency band because of the ability of multiple operators to co-exist using this spectrum.²¹ However, as noted, although the Satellite intends to use 8205.0 MHz for its data downlink, it does not intend to use this frequency band with respect to any operations within the United States. Accordingly, the default service rules in Section 25.217 and any relevant aspects of Section 25.142 of the Commission’s Rules should be waived or otherwise held not to apply.²² Moreover, the proposed frequencies to be used for

²¹ See also *Space Imaging Order* at ¶¶ 10 & 24-25.

²² *Id.* See also FCC File No. SES-MOD-20160524-00450 (approving use of frequencies inclusive of 2085.2 MHz for TT&C). To the extent a waiver of the specified default rules is necessary, permitting a deviation from the rule in the case of an already launched EESS satellite would better serve the public interest than would strict adherence to the general rule and is hereby requested.

TT&C uplink and downlink should be afforded waivers, as set forth further below, or are not subject to rules applicable to other services.²³

Other Rule Waivers. As noted, section 1.3 of the Commission's Rules authorizes the Commission to waive its rules for "good cause shown."²⁴ In part because of the limited nature of the proposed Earth Station operations, USN does not believe any additional technical rule waivers are required in connection with this application beyond the proposed frequencies to be used for TT&C, and that good cause exists to grant USN (and, by extension, the Satellite) a limited waiver of the United States Table of Frequency Allocations ("U.S. Table") as described in section 2.106 of the rules for the frequency bands 2025 – 2110 MHz (Earth-to-Space) and 2200 – 2290 MHz (Space-to-Earth).

In considering request for case-by-case spectrum uses, the Commission has indicated that it would generally grant such waivers "where there is little potential for interference into any service authorized under the Table of Frequency Allocations, and when the case-by-case operator accepts any interference from authorized services."²⁵ Each criterion is met in this case. First, the proposed Earth Station operations are expected to be limited to approximately one to two 10-minute contacts per day for the life of the mission. This limited use poses little burden on the relevant spectrum. Second, the proposed Earth Station's uplink TT&C frequency (a 400 kHz bandwidth centered on 2085.23 MHz) is within a frequency band (2025-2110 MHz) that expressly permits non-government EESS uses (though the Satellite will not be downlinking its EESS data with U.S. earth stations).²⁶ Similarly, although the 2200-2290 MHz band remains

²³ See, e.g., 47 C.F.R. § 25.210(f) (expressly noting that this requirement "does not apply to telemetry, tracking, and command operation").

²⁴ See *Northeast Cellular Tel. Co. v FCC*, 897 F.2d 1166 (D.C. Cir. 1990).

²⁵ See, e.g., FCC File No. SES-STA-20040315-00475 (granting prior USN TT&C approval in these bands).

²⁶ See 47 C.F.R. § 2.106, US Footnote 347 ("In the band 2025-2110 MHz, non-Federal Earth-to-space and space-to-space transmissions may be authorized in the space research and Earth exploration-satellite services subject to such conditions as may be applied on a case-by-case basis. Such transmissions shall not cause harmful interference to Federal and non-Federal stations operating in accordance with the Table of Frequency Allocations.") See also 47 C.F.R. § 25.202(g) (permitting, subject to conditions, in band use of assigned frequencies that may not be at the band edge for TT&C). In addition, the Commission has approved TT&C use within 2085 MHz for other EESS operations. See, e.g., *DigitalGlobe, Inc.*, Order and Authorization, FCC File No. SAT-MOD-20040728-00151 (rel. Sept. 30, 2005); *EarthWatch Incorporated*, Order and Authorization, 12 FCC Rcd 19556, 19558 (¶ 6) (IB 1997).

unallocated in the non-Federal service, other parties also have requested TT&C use of this band for similar purposes.²⁷ Third, the proposed frequencies are consistent with the Satellite's other TT&C operations around the globe, and grant of the proposed frequencies for the Satellite would significantly facilitate its ongoing and safe operations by enabling it to use the same TT&C frequencies as with its other TT&C operations. Fourth, as with prior Earth Station operations, USN will coordinate with other parties operating communication systems in compliance with the Table of Frequency Allocations to safeguard against harmful interference, and has recently undertaken coordination via Comsearch.²⁸ Fifth, USN will conduct TT&C operations centered upon 2085.23 MHz and 2264.5 MHz only on a non-interference, non-protected basis. Accordingly, the FCC, as necessary, should waive any requirement that the Earth Station use TT&C frequencies different for the Satellite's U.S. operations than its non-U.S. operations, especially as this Satellite already has been launched.

IV. APPLICATION PROCESSING ISSUES

This application seeks an earth station license for an earth station that is being used for temporary operations in order to allow TT&C services to be provided to the Satellite. Requirements for such earth station applications were established in the Commission's *DISCO II Order*, and the Commission's *Satellite Licensing Order* did not revise these pre-existing procedure.²⁹ However, in prior cases, the Commission has granted waiver requests of its NGSO-like processing rules with respect to non-U.S. licensed EESS orbiting satellites.³⁰

Accordingly, to the extent necessary to license an earth station seeking to provide TT&C support for a non-U.S.-licensed satellite, USN similarly requests that the Commission process the instant application pursuant to the first-come, first served procedure adopted for NGSO-like satellite systems. Because multiple EESS systems can operate on the same frequencies, they

²⁷ See, e.g., Intelsat License LLC, Petition for Declaratory Ruling to Add HISPASAT 143W-1 to the Permitted Space Station List for Ku- and S-band Operations at 143 W.L. (submitted December 5, 2019) (requesting contingent TT&C operations in the 2072 and 2251 MHz frequencies).

²⁸ See Comsearch Report (dated September 15, 2020) (attached). To the extent helpful, Comsearch coordination also was submitted as part of the request for the STA. In addition, USN notes that other parties have been licensed to use similar frequencies from sites in North Pole, Alaska. See, e.g., SES-LIC-20180607-01260 (BlackSky authorized to use 2071.875 MHz for primary TT&C uplink for EESS operations per E180696).

²⁹ See *Amendment of the Commission's Licensing Rules and Policies*, First Report and Order, IB Docket No. 02-34, 18 FCC Red 10760, ¶ 329 (2003).

³⁰ See *Space Imaging Order* at ¶¶ 8-10; see also *DigitalGlobe, Inc.*, Order and Authorization, FCC File No. SAT-MOD-20040728-00151 (rel. Sept. 30, 2005).

are better suited to the first-come, first-served procedure than a modified processing round. Indeed, the Commission has traditionally processed EESS licenses outside of processing rounds precisely because these systems are capable of sharing spectrum. Although the frequencies to be used by the Satellite for data downlink are not subject to specific Commission review through this Application, which is limited to requesting the ability to provide TT&C services from the proposed Earth Station, the Satellite, as an EESS service, should nonetheless be provided a waiver of any FCC NGSO processing rules due to its EESS capabilities. Accordingly, USN respectfully requests that the Commission waive, for good cause, its NGSO-like processing rules in this case as with prior NGSO EESS operations (and, specifically, in this case, their associated TT&C operations.)

V. PUBLIC INTEREST CONSIDERATIONS

Grant of this application for a new Earth Station that would include the Satellite as a new point of communication would serve the public interest, convenience and necessity in at least the following ways:

- i. USN has had a long and fruitful relationship with NASA and U.S. government clients, and this proposal will help it expand its service offerings, capabilities, and expertise so as to better serve those U.S. government (and other U.S.) operations;
- ii. the proposed permanent authorization will encourage additional expansion of the Earth Station in North Pole, Alaska, which may ultimately contribute to increased or more stable employment in this high-tech field for U.S. residents, and otherwise diversify the customer base for this U.S.-based operation, as set forth previously herein; and
- iii. the proposed Earth Station operations will facilitate command and control operations for the Satellite, which will contribute to a safer and more reliable space environment for all space stations by offering further TT&C capabilities and redundancy.

For these and other reasons set forth in this application, USN urges the Commission to find that grant of this application for a single Earth Station license for TT&C operations will serve the public interest. In addition, to the extent one or more waivers may be required of the Commission's Rules for this proposed Earth Station operation, it is hereby requested, per the foregoing.