

Exhibit A – Narrative Supplement
Amendment Application
Applicant: Kongsberg Satellite Services AS
Call Sign: E220160

Kongsberg Satellite Services AS (“KSAT”) provides this information to supplement its Form 312 application to amend its pending application¹ for a license to operate a satellite earth station in Maui, Hawaii (call sign E220160) (“Station”), pursuant to Section 25.116 of the Commission’s rules.²

The amendment (1) modifies the frequencies requested for the Station, (2) adds two antennas to the Station, (3) adds a remote control point for the Station, and (4) supplements the public interest statement.

The Station will operate in conjunction with the HawkEye 360, Inc. (“HE360”) satellite constellation (call sign S3042) (“HE360 Constellation”).³ The proposed changes will align the Station operations more closely with the needs of HE360, KSAT’s customer. The Station will support communications with the HE360 Constellation for TT&C and payload data. The frequencies requested by KSAT for the Station have been coordinated by HE360 with the relevant federal users.⁴

Frequencies Requested

The following chart provides a comprehensive list of the frequencies requested in this license application, as amended:⁵

¹ Application of Kongsberg Satellite Services AS for a License for a Maui, HI Earth Station, IBFS File No. SES-LIC-20221019-01103 (filed Oct. 13, 2022) (“Maui Station License Application”). Contemporaneously with this amendment application, KSAT will file a request for special temporary authority for use of the Station pending the license grant. A previously filed request for special temporary authority for use of the Station pending the license grant has been withdrawn (IBFS File No. SES-STA-20221019-01591 (filed Oct. 20, 2022; withdrawn May 1, 2023)).

² 47 C.F.R. § 25.116.

³ See Stamp Grant, HawkEye 360, Inc., IBFS File Nos. SAT-MOD-20220906-00099, SAT-AMD-20221014-00136 (granted in part Mar. 3, 2023, grant in part reissued Mar. 13, 2023) (“HE360 License”). See also Stamp Grant, HE360, IBFS File No. SAT-LOA-20190102-00001 (granted in part Dec. 10, 2019); Stamp Grant, HE360, IBFS File No. SAT-AMD-20200728-00090 (granted Dec. 14, 2020, and reissued Dec. 17, 2020); Stamp Grant, HE360, IBFS File No. SAT-MOD-20210114-00010 (granted May 25, 2021).

⁴ See *HE360 License*, *supra* note 3.

⁵ As originally filed, the *Maui Station License Application* requested three S-band downlink channels (2240-2244 MHz, 2252-2256 MHz, and 2258-2262 MHz). KSAT has removed those frequency channels from the application. The amendment adds S-band transmit channels that are outside the 2061-2079 MHz frequency range requested in the *Maui Station License Application* (2046.5 MHz,

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Band (MHz)	Use	Center Frequency	Polarization	Max Bandwidth
X-band: 8025-8400	Primary payload downlink (space-earth)	Channel#1 – 8075 MHz	RHCP	80 MHz
		Channel#2 – 8165 MHz		
		Channel#3 – 8255 MHz		
X-band: 8025-8400	Primary TT&C downlink (space-earth)	Channel#1 – 8291 MHz	RHCP	4 MHz
		Channel#2 – 8297 MHz		
		Channel#3 – 8303 MHz		
S-band: 2025-2110	Primary payload uplink (earth-space)	Channel#1 – 2046.5 MHz	RHCP	2.66 MHz
		Channel#2 – 2049.3 MHz		
		Channel#3 – 2062.7 MHz		
		Channel#4 – 2068.2 MHz		
		Channel#5 – 2075.0 MHz		
		Channel#6 – 2077.4 MHz		
S-band: 2025-2110	Primary TT&C uplink (earth-space)	Channel#1 – 2052.1 MHz	RHCP	180 kHz ⁶
		Channel#2 – 2053.0 MHz		
		Channel#3 – 2053.7 MHz		
		Channel#4 – 2063.965 MHz		
		Channel#5 – 2064.965 MHz		
		Channel#6 – 2065.965 MHz		

2049.3 MHz, 2052.1 MHz, 2053.0 MHz, and 2053.7 MHz). The amendment specifies the requested channels.

⁶ The 120 kHz bandwidth S-band uplink channels requested in the *Maui Station License Application* has been amended to a 180 kHz bandwidth.

Both the frequencies⁷ and the Station⁸ have been approved and *coordinated with the relevant federal users*.⁹ The COMSEARCH Frequency Coordination Report submitted with the original application will be updated to account for the expanded S-band transmit frequency range.

Station Specifications and Additional Antennas

The Station will use three identical 3.7 meter antennas (MU1, MU2 and MU3) for operation. Form 312, Schedule B, has been amended accordingly. The specifications for the Station are as follows:

Site Address: 226 Nopu Street, Maui, HI 96784
Site Coordinates: 20° 49' 2.1" N, 156° 27' 16.1" W (NAD-83)
Site Elevation (AMSL): 36.05 meters
MU1 Antenna Coordinates: 20.81732° N, -156.45474° E
MU2 Antenna Coordinates: 20.81703° N, -156.45445° E
MU3 Antenna Coordinates: 20.8174° N, -156.45444° E
Make/Model/Diameter of Antennas: Orbital 3.7 meter
Antenna Size: 3.7 m diameter (for all antennas)
Total Input Power at Antenna Flange: 18.2 watts
Antenna Gain Transmit and/or Receive: 35.4 dBi at 2.0 GHz; 44.3 dBi at 8.0 GHz
Total EIRP for all carriers (dBW): 48.0
Antenna Elevation Angle Western Limit / Eastern Limit: 5° / 5° (for all frequencies)
Maximum EIRP Density toward the Horizon (dBW/4kHz): 0 (for all frequencies)
Max. Antenna Height Above Ground Level (meters): MU1: 5.66; MU2: 5.66; MU3: 5.23
Max. Antenna Height AMSL (meters): MU1: 43.46; MU2: 43.46; MU3: 43.33

Please see the coordination contour map from COMSEARCH attached to the KSAT license application for the Station,¹⁰ which will be supplemented. The Radiation Hazard Study submitted with this amendment applies to all three antennas.

⁷ See *HE360 License*, Reissued Attachment to Grant, Appendix A (“Table of Frequency Bands Coordinated with NASA/NOAA/USAF, Satellites 1-15 (Call Sign S3042)”).

⁸ See *HE360 License*, Reissued Attachment to Grant, Appendix B (listing “Maui, HI (USA), 20.8°N, -156.5°E” among “HawkEye 360 Earth Stations Coordinated With Federal Agencies”).

⁹ See *HE360 License*, Reissued Attachment to Grant, Conditions 7 and 10.

¹⁰ *Maui Station License Application* (COMSEARCH coordination report attachment).

Remote Control Point

The Station is located at a site operated by Hawaii Pacific Teleport (24/7 Network Operations Centre, +1-808-674-9157). The Station will be remotely operated from KSAT's Tromsø Network Operations Center in Tromsø, Norway, and can be reached 24/7 at (+47) 77 60 02 50. KSAT meets the conditions listed in Section 25.271 of the Commission's rules for operation of a transmitting earth station by remote control.

Applicant Legal and Technical Qualifications

KSAT, of Tromsø, Norway, operates a global network of ground stations for satellite TT&C and data acquisition and launch and early orbit phase services or "LEOPS." KSAT is a commercial limited liability stock company, organized under the laws of Norway. KSAT is an existing Commission licensee.

Public Interest

Grant of the license for the Station is in the public interest. The Station is needed to meet the communication needs of the HE360 Constellation, which includes three recently launched HE360 satellites operating in a mid-inclination orbit. Without access to an authorized and coordinated mid-latitude station, such as the Station, the ability of these mid-inclination satellites to downlink data is materially limited. These satellites, as well as the HE360 Constellation, provide service to customers, including the United States government, and support critical national security interests. For these reasons, we respectfully request that the Commission grant the application for the Station license.