

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Maxar License Inc.

Application for Modification of
Authorization (Call Sign S2129)

File Nos.

SAT-AMD-_____
SAT-AMD-20210909-00120
SAT-AMD-20210802-00094
SAT-MOD-20210506-00060

**THIRD AMENDMENT OF APPLICATION OF MAXAR LICENSE INC.
FOR MODIFICATION OF AUTHORIZATION**

Maxar License Inc. (“Maxar”), pursuant to FCC Rule 25.116, requests further amendment of its pending application to modify the authorization for its Earth Exploration Satellite Service (“EESS”) non-geostationary satellite orbit (“NGSO”) system operating under Call Sign S2129.¹ Specifically, Maxar seeks to update the transmitting channel bandwidth for its X-band payload downlink operations on Maxar’s WorldView-Legion satellites, as well as submit corresponding changes to the Effective Isotropic Radiated Power (“EIRP”) density and maximum Power-Flux Density (“PFD”) values. Accordingly, this amendment contains an updated Schedule S. All other information in the WorldView-Legion Modification Application, as Amended, remains unchanged, and Maxar incorporates by reference the information previously provided.

¹ 47 C.F.R. § 25.116. See Application of Maxar License Inc. for Modification of Authorization (Call Sign S2129), IBFS File Nos. SAT-MOD-20210506-00060 (filed May 6, 2021), SAT-AMD-20210802-00094 (filed Aug. 2, 2021), and SAT-AMD-20210909-00120 (filed Sept. 9, 2021) (collectively, requesting FCC approval to modify the orbital parameters of the WorldView-Legion satellites) (“WorldView-Legion Modification Application, as Amended”). See generally *DG Consents Sub, Inc. WorldView-Legion Application*, Stamp Grant, IBFS File No. SAT-MOD-20180918-00073, Call Sign S2191 (granted June 13, 2019) (“*WorldView-Legion Grant*”).

Scheduled for initial launch in the second quarter of 2022, the WorldView-Legion satellites will provide high-resolution satellite imagery with enhanced spectral and revisit characteristics. Grant of this further amended application will serve the public interest by enabling Maxar to utilize fully the capabilities of its WorldView-Legion satellites to deliver imaging services that support national security, environmental monitoring and forecasting functions, and other applications.

I. DESCRIPTION OF THE THIRD AMENDMENT REQUESTED

On June 13, 2019, the Commission authorized Maxar's predecessor company to construct, launch, and operate twelve additional satellites known as WorldView-Legion.² The satellites are licensed for high-resolution imagery and telemetry transmissions in the 8025-8400 MHz (space-to-Earth) EESS band and for satellite command reception in the 2025-2110 MHz (Earth-to-space) EESS bands. Maxar seeks authority by this application to amend the transmitting bandwidth for X-band payload downlink operations and to submit corresponding changes to the EIRP density and maximum PFD levels.

Specifically, Maxar seeks to change the transmitting bandwidth for Channel ID WB in the Schedule S from 150 megahertz to 320 megahertz, as shown in the table below. The transmitting bandwidths for Channel IDs NB1 and NB2 operating in the 8379.68-8380.32 MHz band will remain unchanged.

² See generally *WorldView-Legion Grant* (approving modification to construct, launch, and operate twelve additional NGSO remote sensing space stations at altitudes between 450 and 870 km immediately following deployment and subsequently at nominal altitudes of 763 km for four sun-synchronous space stations inclined at 98.48 degrees and 518 km for eight space stations inclined at 45 degrees). See also *WorldView-Legion Modification Application, as Amended* (requesting FCC approval to modify the orbital parameters of the WorldView-Legion satellites).

Channel ID	Channel Bandwidth	Center Frequency
WB	320 MHz	8185.0 MHz
NB1	0.625 MHz	8380.0 MHz
NB2	0.037 MHz	8380.0 MHz

In accordance with Section 25.114 of the Commission's rules,³ the technical characteristics of the proposed amendment are detailed in the Schedule S portion of the FCC Form 312. This includes reductions in EIRP density and maximum PFD values for Beam ID WB resulting from changes to the channel bandwidth, while maintaining the maximum EIRP value.

II. GRANT OF THE AMENDMENT WILL SERVE THE PUBLIC INTEREST

Commission approval of this application serves the public interest because it will allow Maxar to utilize the WorldView-Legion satellites more effectively, which will in turn provide immense value for remote sensing customers. The Commission has recognized the critical importance of EESS, which "allow[s] for the delivery of enhanced next-generation imaging services" and "enhance[s] national security, environmental monitoring and forecasting functions."⁴ Increasing the transmitting channel bandwidth operations in the 8025-8400 MHz band from 150 megahertz to 320 megahertz will enable Maxar to expand its ability to provide its government and non-Government users with enhanced data and timeliness to meet national defense, mapping, land use, natural disaster monitoring, and other critical customer demands from the WorldView-Legion satellites.

Additionally, grant of the amendment will not adversely affect the interference environment. Importantly, increasing the channel bandwidth actually reduces the EIRP Density from -51.8 dBW/Hz to -54.0 dBW/Hz. Moreover, the modified WorldView-Legion system will

³ 47 C.F.R. § 25.114(c).

⁴ *DigitalGlobe, Inc. Modification of Authorization to Construct, Launch, and Operate a Remote-Sensing Satellite System*, Order and Authorization, 20 FCC Rcd 15696, ¶ 1 (IB 2005).

continue to meet PFD limits in Table 21-4 of Article 21 of the ITU Radio Regulations to protect terrestrial services and No. 22.5 of the Radio Regulations to protect geostationary satellite orbit fixed-satellite services (Earth-to-space) and the meteorological-satellite services (Earth-to-space). Maxar will also continue to coordinate its use of the 8025-8400 MHz band to avoid interference with other EESS systems.

III. REQUESTS FOR WAIVER

Maxar requests, to the extent necessary, that the waivers previously requested in the WorldView-Legion Modification Application, as Amended, with respect to Sections 25.156, 25.157, and 25.217(b) extend to the instant application.⁵ The amended transmitting channel bandwidth for Maxar's X-band payload downlink operations requested in the instant application does not alter the good cause basis for waiver presented previously. Grant will not preclude subsequent EESS applicants from operating in the 8025-8400 MHz band or cause harmful interference to other EESS systems currently operating in the band, as Maxar will continue to coordinate its use of the X-band with other EESS operators. Additionally, Maxar must comply with the technical requirements in Part 2 of the Commission's rules and specified PFD limits, mitigating the risk of harmful interference to other operators in the band.

⁵ 47 C.F.R. §§ 25.156, 25.157, 25.217(b). *See* Application of Maxar License Inc. for Modification of Authorization (Call Sign S2129), IBFS File Nos. SAT-MOD-20210506-00060, at 5-6 (filed May 6, 2021).

IV. CONCLUSION

For the reasons set forth above, Maxar respectfully requests that the Commission grant this request for amended authority.

Respectfully submitted,

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