

Description of Modification

Viasat, Inc. (“Viasat”) requests authority to modify the coordinates of its Ka-band gateway-type earth station located in Memphis, Tennessee (Call Sign E160130). Challenges in acquiring a suitable site lease have necessitated a change to the earth station location. Viasat was able to secure a suitable site that is approximately three miles from the originally authorized location for this earth station. The address of the modified location is 5685 Old US Highway 78, Memphis, TN 38118. Grant of this modification is in the public interest because it will allow the deployment of the earth station, which will serve as an aggregation and interconnection point for the ViaSat-2 network. The Schedule B to the Form 312 provides the modified site information. All other technical parameters remain unchanged.

The earth station is authorized to communicate with the ViaSat-2 satellite at 69.9° W.L. and to operate in the 17.7-19.3 GHz and 19.7-20.2 GHz downlink frequencies and the 27.5-29.1 GHz and 29.5-30.0 GHz uplink frequencies. Viasat is authorized to operate the earth station (i) in the 18.3-18.8 GHz, 19.7-20.2 GHz, 28.35-28.6 GHz and 29.5-30.0 GHz frequencies on a primary basis; (ii) in the 18.8-19.3 GHz and 28.6-29.1 GHz frequencies on a secondary basis to NGSO FSS systems; (iii) in the 17.8-18.3 GHz band on a secondary basis to fixed terrestrial services; (iv) in the 27.5-28.35 GHz frequencies on a secondary basis to Upper Microwave Flexible Use (“UMFU”) services with the rights and protections afforded by Section 25.136; and (v) in the 17.7-17.8 GHz on an unprotected, non-interference basis pursuant to a waiver.

Since the original license was granted, the Commission has adopted Section 25.136, which provides that earth stations in the 27.5-28.35 GHz band segment requested prior to July 14, 2016 that were subsequently granted may be operated without providing interference protection to stations in the UMFU service.² The original application for this earth station was filed on July 13, 2016 and was granted on January 19, 2017, and meets these criteria.

In addition, the earth station meets the criteria for protection under Section 25.136(a)(4) at the modified location. The attached Technical Analysis in Exhibit A details the earth station’s compliance with these criteria. The modified earth station location is in Shelby County, Tennessee. There are no other earth stations authorized for the 27.5-28.35 GHz band segment in Shelby county.³ Therefore, this earth station would be the first of the three earth stations allowed to operate in Shelby county under Section 25.136(a)(4)(i).

¹ After Viasat sought to operate in the 18.8-19.3 GHz and 17.8-18.3 GHz band segments on a non-interference basis pursuant to waivers of the U.S. Table of Frequency Allocations, the Commission adopted secondary allocations for GSO FSS operations in these bands. *See Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order, 32 FCC Rcd 7809 ¶¶ 7, 15 (2017).

² *See* 47 C.F.R. § 25.136(a)(3).

³ *See id.* at § 25.136(a)(4)(i).

In addition, the total population in the census blocks covered by the -77.6 dBm/m²/MHz contour is well below the respective thresholds specified in Section 25.136(a)(4)(ii).⁴ The -77.6 dBm/m²/MHz contour around the earth station covers portions of Shelby County and the adjacent DeSoto County in Mississippi. The attached Technical Analysis details the calculation methodology of the covered population and demonstrates that the earth station complies with the applicable limit for both Shelby and DeSoto Counties.

The -77.6 dBm/m²/MHz contour does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port, or any road identified as an Interstate, Freeway, Expressway or Other Principal Arterial road by the Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System (“HEPGIS”) map.⁵

Finally, Viasat has commissioned Comsearch to identify any existing terrestrial facilities constructed and in operation in the 27.5-28.35 GHz band for purposes of coordinating with any such stations within the earth station’s -77.6 dBm/m²/MHz contour. As explained in the attached Comsearch report, no such stations were identified. Therefore, the coordination requirement in Section 25.136(a)(4)(iv) is satisfied. As recommended in that Comsearch report, Viasat has initiated coordination with existing terrestrial licensees in the vicinity of the modified earth station site, and Comsearch has sent a prior coordination notice (“PCN”) on Viasat’s behalf to all such licensees. No objections were received in response to the PCNs.

Therefore, the earth station continues to qualify to operate without regard to any potential UMFU stations near the modified location.

⁴ See *id.* at § 25.136(a)(4)(ii).

⁵ <https://hepgis.fhwa.dot.gov/fhwagis/#>; see *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Second Report and Order, 32 FCC Rcd 10988, Appendix B (2017) (“HEPGIS allows the user to enter any street address in the U.S. and display an interactive map with a legend that identifies road classifications as they are defined by the Department of Transportation at 23 C.F.R. Section 470.105 pursuant to 23 U.S.C. Sections 101 and 103”); 47 C.F.R. § 25.136(a)(4)(iii).