Exhibit B

This Exhibit B presents the power flux-density ("PFD") contour analysis and associated assessments prepared by Northwood Space Corporation ("Northwood") pursuant to Section 25.136(a)(4) of the Federal Communications Commission's ("FCC") rules[1] for Northwood's gateway earth station facility located at or near Santa Paula in Ventura County, California (the "Site") relative to the Upper Microwave Flexible Use Service ("UMFUS") deployments in the 27.5–28.35 GHz band in the county.

1. PFD Contour Generation

a. Earth Station Parameters

Table 1 below sets forth the earth station parameters used by Northwood to generate the PFD contour for the Site. The latitude and longitude values reflect the Site's confirmed coordinates.

Table 1. Northwood Earth Station Parameters

Field	Value	Units
County / Municipality	Ventura County	
Latitude	34.314520	° N
Longitude	–119.103961	° W
Simulation Frequency	28	GHz
Maximum Number of Simultaneously Active Antennas[2]	6	antennas
Antenna Centerline Height (Above Ground Level)	1.52	meters
Worst-case Antenna Gain toward the Horizon	–10	dBi
Average Antenna Gain toward the Horizon	–20	dBi
RF Transmit Power Density (antenna input)	24.0	dBW/MHz
Per-Antenna EIRP Density toward the Horizon	4.0	dBW/MHz
Aggregate EIRP Density toward the Horizon (6 antennas)	11.8	dBW/MHz

The RF transmit power in Table 1 represents the power required to communicate with GSO satellites. Power levels for communications with much lower altitude NGSO satellites will be several orders of magnitude lower.

The gain toward the horizon in Table 1 reflects the off-axis characteristics of Northwood's 2.4-meter Ka-band antennas together with the Site's operational pointing geometry. Each antenna is highly directive, with an on-axis gain of 55.2 dBi and a half-power beamwidth of approximately

[1] 47 C.F.R. § 25.136(a)(4).

[2] A single antenna is the typical number of antennas transmitting at any one time. All six antennas were used for modelling the worst-case aggregate interference.

0.3 degrees, and its gain declines steeply with off-axis angle. The reference radiation pattern in Recommendation ITU-R S.465-6 declines to −10 dBi for off-axis angles at and beyond approximately 48 degrees. In reality, the measured off-axis gain of Northwood's antennas is substantially better than this reference envelope. For purposes of this Section 25.136 analysis, we use a mean off-axis antenna gain of –20 dBi to represent the earth station's antenna gain toward the horizon. The actual off-axis gain toward the horizon varies between approximately –10 dBi and –30 dBi across large portions of the angular range (and drops as low as –50 dBi at certain angles). A mean off-axis gain of –20 dBi is a reasonable, statistically representative simplification that accounts for the full range of sidelobe variation across all operational beam positions. This approach is consistent with industry practice of evaluating earth station emissions against emission envelopes rather than requiring exhaustive enumeration of every antenna pattern variation. The aggregate input value in Table 1 conservatively applies the full 10·log10(6) combination of all six antennas, without any reduction for the varying and independent pointing of the antennas.

b. PFD Contour Methodology

To demonstrate compliance with the criteria in Section 25.136(a)(4) of the Commission's rules allowing fixed-satellite service ("FSS") earth station transmissions in the 27.5–28.35 GHz band without providing additional interference protection to co-frequency UMFUS licensees, Northwood generated the Site's −77.6 dBm/m²/MHz PFD contour using the earth station parameters set forth in Table 1. The contour was generated by creating a raster grid of measurement points located 10 meters above ground level and surrounding the earth station, and by calculating the path attenuation, received power, and power flux-density to each point.

Northwood used bare-Earth digital terrain elevation data obtained from the U.S. Geological Survey to characterize the terrain surrounding the Site. Northwood applied Recommendation ITU-R P.452 to estimate the basic transmission loss not exceeded for 10% of time between the Site and each point on the PFD measurement grid. To account for clutter losses at the UMFUS base station receive point, Northwood applied Recommendation ITU-R P.2108 and assumed that 80% of UMFUS base station deployments are located below rooftop level and therefore experience clutter losses consistent with that recommendation. No clutter loss was assumed at the Northwood earth station. Northwood designed the Site to ensure that the PFD produced by the earth station does not exceed −77.6 dBm/m²/MHz at 10 meters above ground level anywhere outside of the contour depicted in Figure 1 below.

In addition, Northwood will deploy a corrugated metal perimeter fence around the earth station facility at the Site. The fence functions as a diffracting screen, and the PFD contour analysis set forth herein accounts for an additional 10 dB of signal attenuation toward the horizon attributable to diffraction over the fence. The attenuation is calculated using the knife-edge diffraction methodology set forth in Recommendation ITU-R P.526, which models the signal loss caused by propagation over and around obstacles of known geometry. The corrugated fence profile presents an effective diffracting edge to signals propagating at low elevation angles, and the resulting diffraction loss is incorporated into the PFD contour depicted in Figure 1 below.

c. Gateway PFD Contour Figure

Figure 1 below depicts the Site's −77.6 dBm/m²/MHz PFD contour together with the boundaries of the U.S. Census tabulation blocks that intersect the contour. The green dot in Figure 1 marks the location of the Site. The map plots each intersecting census block by its block identifier against the Site's latitude and longitude, and identifies the total population determined to be covered by the contour. This figure and the population coverage tables in Section 2.b below are derived from the population-block intersection analysis performed for the Site.

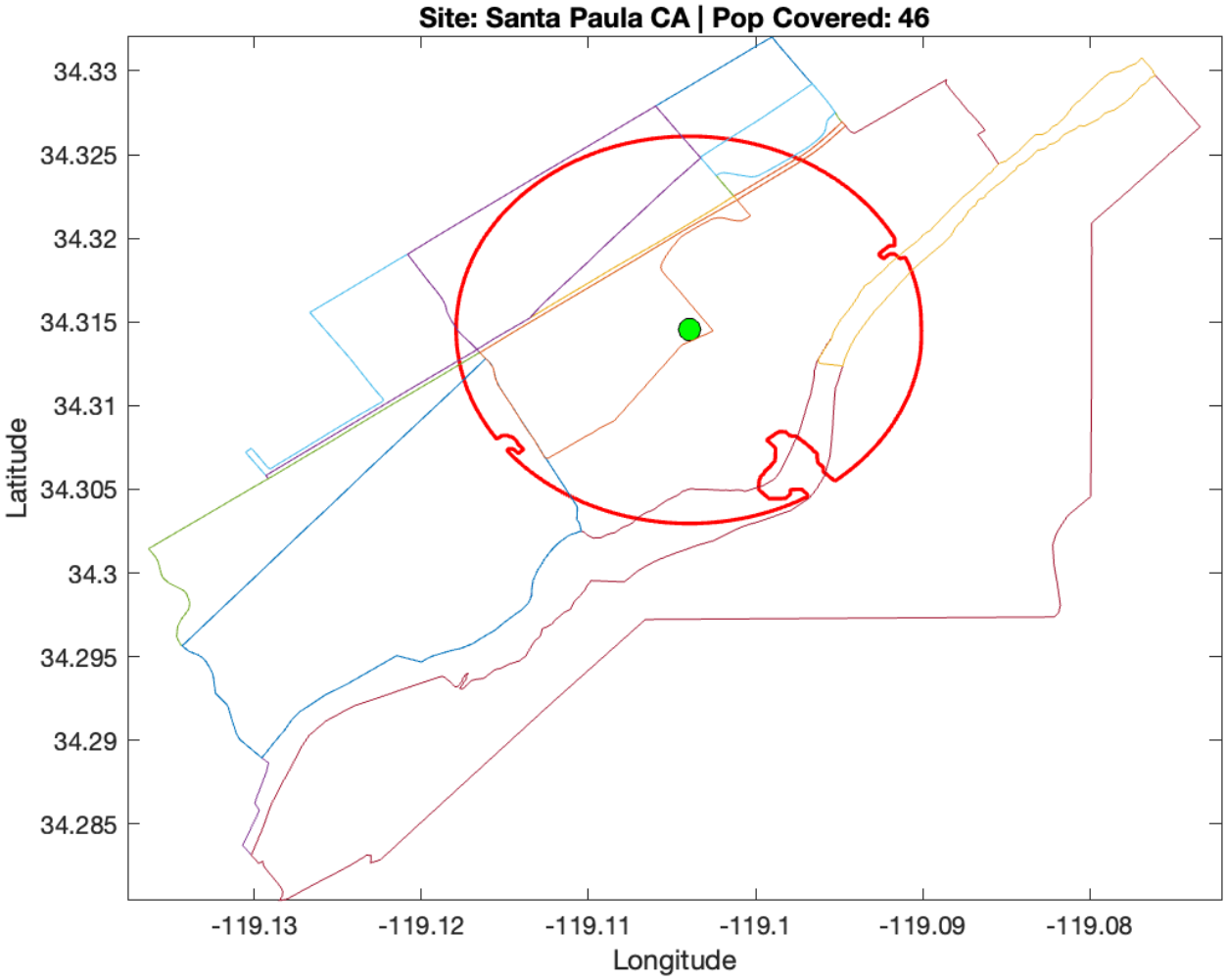

Figure 1. Santa Paula, CA Gateway PFD Contour (−77.6 dBm/m²/MHz)

2. Section 25.136(a)(4) Protection Criteria Analysis

a. Other Earth Stations Located in the County (47 C.F.R. § 25.136(a)(4)(i))

Section 25.136(a)(4)(i) of the Commission's rules requires the applicant to demonstrate that there are no more than two other authorized earth stations operating in the 27.5–28.35 GHz band pursuant to Section 25.136(a) in the same county.[3]

Northwood has reviewed the Commission's licensing database and identified, as of the date of this submission, three other FSS earth stations within Ventura County.[4] None of these earth stations is collocated with the Site, and none of their respective −77.6 dBm/m²/MHz PFD contours is known to overlap with the Site's contour depicted in Figure 1 above.

Because there are already three other 28 GHz earth stations in Ventura County, Northwood has concurrently sought a waiver of the "no more than two other" per-county limit set forth in Section 25.136(a)(4)(i) of the Commission's rules.

b. Population Covered by Census Block (47 C.F.R. § 25.136(a)(4)(ii))

Section 25.136(a)(4)(ii) requires the applicant to demonstrate that the area covered by the earth station's PFD contour, "together with the similar area of any other earth station" authorized under Section 25.136(a), does not cover, in the aggregate, a population exceeding certain prescribed limits.[5] These limits are: (1) 0.1% of the county population if that population exceeds 450,000; (2) 450 people if the county population is between 6,000 and 450,000; or (iii) 7.5% of the county population if that population is fewer than 6,000.[6] Under FCC guidance implementing Section 25.136(a)(4)(ii), where the PFD contours of two earth stations overlap within the same licensing area, the population covered by the overlap is counted only once against the aggregate population limit for that licensing area, and where a contour covers multiple licensing areas, the covered population in each licensing area is counted against the limit applicable to that specific area.[7]

The total population of Ventura County, according to 2020 U.S. Census Bureau data, is 843,843 and therefore the applicable population limit pursuant to Section 25.136(a)(4)(ii) is 843.843 persons.[8]

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[3] 47 C.F.R. § 25.136(a)(4).

[4] *See* Application of SES Americom, Inc., ICFS File No. SES-MOD-20170920-01039 (granted Dec. 6, 2017); Application of WorldVu Satellites Limited, ICFS File No. SES-LIC-20190422-00538 (granted Oct. 6, 2021) ("OneWeb Application"); Application of HNS License Sub, LLC, ICFS File No. SES-MOD-20201204-01305 (granted July 25, 2023) ("Hughes Application").

[5] 47 C.F.R. § 25.136(a)(4)(ii).

[6] 47 C.F.R. § 25.136(a)(4)(ii), Table 1.

[7] *Space Bureau Updates its Guidance on Siting Methodologies for Earth Stations Seeking to Operate in the 24.75-25.25 GHz, 27.5-28.35 GHz, 37.5-40 GHz, 47.2-48.2 GHz, and 50.4-51.4 GHz Bands to Demonstrate Compliance with Section 25.136*, 40 FCC Rcd 1547, 1556 (rel. Mar. 10, 2025) ("2025 UMFUS Guidance").

[8] *See Ventura County, California, U.S. Census Bureau*, https://www.census.gov/quickfacts/fact/table/venturacountycalifornia/PST045225 (last visited Aug. 22, 2026).

Table 2 below sets forth, on a census-block basis, the total population, total block area, the percentage of each block's area falling within the Site's PFD contour, and the resulting covered population which is calculated to be proportional to the covered area of each block.

Table 2. Population Covered by Census Block

County Name	Block ID	Total Population	Total Area	Partial Area	% Area	Covered Population
Ventura County	3025	0	228184.438	228184.438	100	0
Ventura County	1067	0	1015874.596	229040.7052	22.54615934	0
Ventura County	3026	0	38652.75965	26558.83925	68.71136625	0
Ventura County	3027	6	490649.7993	11386.9007	2.32077965	0.139246779
Ventura County	1068	36	2742953.119	2063617.553	75.23342408	27.08403267
Ventura County	3023	10	316443.9854	17874.49578	5.648549698	0.56485497
Ventura County	3015	0	22178.89098	12501.01438	56.36447012	0
Ventura County	3024	0	41990.03445	41990.03445	100	0
Ventura County	3036	0	36309.65875	3156.053578	8.692049683	0
Ventura County	1076	0	738137.1891	11134.04526	1.508397818	0
Ventura County	3022	0	214149.9598	78930.41241	36.85754249	0
Ventura County	1051	8	5996398.978	393479.4484	6.561929081	0.524954326
Ventura County	1075	0	2524172.337	132848.4422	5.263049605	0
Ventura County	1074	9	892858.5313	892858.5313	100	9
Ventura County	1054	0	313818.5506	102618.8056	32.70004448	0
Ventura County	3020	11	1040692.119	797760.6547	76.65674028	8.43224143

Table 3 below sets forth the total population covered by the Site's PFD contour in the county.

Table 3. Population Covered by County

County Name	Population Covered
Ventura County	46

Note: Covered population figures in Table 2 are summed and the result is rounded up to the next whole number of persons

As mentioned above, at the time of this filing, there are three other FSS earth stations in the 27.5–28.35 GHz band in Ventura County. Two of the licensees have provided Section 25.136(a)(4) demonstrations in their applications showing that the PFD contours of their earth stations cover populations of 238 and 14, respectively.[9] The other earth station is grandfathered under Section 25.136(a)(2) of the Commission's rules and was not required to provide a similar PFD demonstration in its application.[10] Northwood has treated this earth station's PFD population

[9] OneWeb Application, Exhibit A at 11; Hughes Application, Attachment B at 4. HNS License Sub, LLC also provided a supplemental analysis in response to objections from Verizon showing that its station's PFD population coverage under the worst-case scenario would be 19 as opposed to 14. HNS License Sub, LLC, *Written Ex Parte Presentation and Supplemental UMFUS Showing*, ICFS File Nos. SES-MOD-20201204-01305, et al., at 30-31 (Apr. 14, 2022).

[10] *See* 47 C.F.R. § 25.136(a)(2); Radio Station Authorization at 3, Application of SES Americom, Inc., ICFS File No. SES-MOD-20170920-01039 (Dec. 6, 2017).

coverage as 0 for purposes of this analysis.[11] The aggregate population coverage for the Site is therefore 298, which does not exceed the approximately 844 population limit.[12]

c. Infrastructure-Crossing Analysis (47 C.F.R. § 25.136(a)(4)(iii))

Section 25.136(a)(4)(iii) of the Commission's rules provides that an earth station's PFD contour shall not cross any roads classified as Interstate, Other Freeways and Expressways, or Other Principal Arterials, as defined in the functional classification guidelines issued by the Federal Highway Administration. The Space Bureau's Revised Siting Guidance[13] clarifies that applicants should consult the Federal Highway Administration Office of Planning, Environment, and Realty's Executive Geographic Information System ("HEPGIS") map to determine the classification of roads in the vicinity of the proposed earth station, and specifically the 2022 Highway Performance Monitoring System Functional Class on National Highway System ("NHS") layer.

Northwood has reviewed the HEPGIS map and the 2022 NHS functional classification data for the area surrounding the Site. Based on this review, the Site's −77.6 dBm/m²/MHz PFD contour depicted in Figure 1 above intersects with one segment of road, approximately 2.3 kilometers in length, classified as Other Principal Arterials on the HEPGIS NHS map.

Because the Site's PFD contour crosses a road identified for additional interference protection in the Space Bureau's guidelines, Northwood has concurrently sought a waiver of the road-crossing restriction set forth in Section 25.136(a)(4)(iii) of the Commission's rules in connection with its application for the Site.

Section 25.136(a)(4)(iii) also provides that an earth station's PFD contour shall not encompass any major event venue, urban mass transit route, passenger railroad, or cruise ship port. Northwood's analysis of the Site confirms that the PFD contour depicted in Figure 1 does not encompass any such infrastructure, and this requirement is therefore satisfied.

d. UMFUS Coordination (47 C.F.R. § 25.136(a)(4)(iv))

Section 25.136(a)(4)(iv) requires that the applicant complete coordination with UMFUS licensees within the earth station's PFD contour. Northwood has completed such coordination and has attached the coordination report as Exhibit A to the application.[14]

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[11] The PFD contour for this grandfathered station operated by SES Americom, Inc. was determined by one of the other earth station operators in the county, WorldVu Satellites Limited, to cover a population of 20 people. OneWeb Application, Exhibit A at 11. Including the grandfathered station's population coverage in the analysis here would increase the aggregate population coverage for the Site to 318, which still would not exceed the 843.843 population limit.

[12] Accounting for HNS License Sub, LLC's worst-case scenario PFD population coverage of 19 still would not cause the aggregate population coverage for the Site to exceed the population limit.

[13] 2025 UMFUS Guidance, 40 FCC Rcd at 1557.

[14] 47 C.F.R. § 25.136(a)(4)(iv).