Applicant should complete a Schedule S, if required

FCC Form 312-LIC

FEDERAL COMMUNICATIONS COMMISSION

Application for Earth Station Authorizations

FCC 312 Main Form
FOR OFFICIAL USE ONLY

Approved by OMB No. 3060-0678
Estimated time per response: 0.5-80 hours
Edition date: August 2024

See Instructions Print Form

Applicant Information (Q1 - 16)

Applicant

*Enter a description of this application to identify it on the main menu:

Des Moines, IA - SAN License Application

*FRN

0004963088

Name

Viasat, Inc.

Attention

Jarrett S Taubman

Doing Business As (DBA)

Title

VP & Deputy Chief Gov. Affairs and Regul

Street Address

6155 El Camino Real

Phone

2023835050

Street Address 2

Fax

City

Carlsbad

Email

jarrett.taubman@viasat.com

State

CA

Zip Code/Postal Code

92009

Country

United States of America

Contact Same as Applicant

Contact

FRN

0004963088

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Email

jarrett.taubman@viasat.com

State

CA

*Relationship

Legal Counsel

Zip Code/Postal Code

92009

Country

United States of America

Classification of Filing

17a. Select the appropriate classification of application from the drop-down menu below:

b1. Application for License of New Station

Application Fees

17b. Will a fee be paid?

(•) Yes ( ) No

*17c. If yes, select the appropriate fee code for the application.

CMO

17d. Fee Classification B

Fee Amount

$205

Waivers

*18a. Does the Applicant request a waiver(s) of the Commission's rules?

(•) Yes ( ) No

*18b. Identify the rule section(s) for which a waiver is sought from the below.

47 C.F.R. § 25.136(a)(4)(iii)

18c. Waiver Request Documentation

*

19a. If this filing is an amendment to a pending application, enter date pending application was filed:

19b. If this filing is an amendment to a pending application, enter file number of pending application:

Type of Service

*20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply.

✖ Fixed-Satellite Service

*21. Status

( ) Common Carrier (•) Non-Common Carrier ( ) N/A

*22. Select all that apply from the drop-down below:

Non-U.S. Licensed Satellites

22a. File Number(s)

*22b. A new Schedule S will be included with this application

( ) Yes (•) No

23. If Applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filing. Are these facilities:

( ) Connected to the Public Switched Network ( ) Not Connected to the Public Switched Network (•) N/A

24. FREQUENCY BAND(S): Select the box(es) next to all applicable frequency band(s).

*Check all that apply

- [ ] 24a. VHF-Band (30-300 MHz)
- [ ] 24b. UHF-Band (300-1000 MHz)
- [ ] 24c. L-Band (1-2 GHz)
- [ ] 24d. S-Band (2-3 GHz)
- [ ] 24e. C-Band (3.5-8 GHz)
- [ ] 24f. X-Band (8-10 GHz)
- [ ] 24g. Ku-Band (10-14.5 GHz)
- [ ] 24h. Ka-Band (17-30 GHz)
- [ ] 24i. Q/V-Band (35-75 GHz)
- [ ] 24j. Other Frequency Band

Type of Station

*25a. CLASS OF STATION: Select the Class of Station/Orbit Type

a. FSS Fixed Earth Station (single location)

25b. Estimated Operational Lifetime of Space Station(s) From Date of Launch (years)

15

25c. Space Station or Satellite Network Name

ViaSat-3

*25d. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States?

(•) Yes ( ) No

If Yes, attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate.

*

25e. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

UK

*26. Type of Earth Station

(•) Transmit/Receive ( ) Transmit-only ( ) Receive-only

Purpose of Modification

27. The purpose of this proposed modification or amendment is to:

Check all that apply

- [ ] 27a. Authorization to add new emission designator and related service
- [ ] 27b. Authorization to change emission designator and related service
- [ ] 27c. Authorization to increase EIRP and EIRP density
- [ ] 27d. Authorization to replace antenna
- [ ] 27e. Authorization to add antenna
- [ ] 27f. Authorization to relocate fixed station
- [ ] 27g. Authorization to change assigned frequency(ies)
- [ ] 27h. Add frequencies
- [ ] 27i. Authorization to add Points of Communication
- [ ] 27j. Authorization to change Points of Communication
- [ ] 27k. Authorization for facilities for which environmental assessment and radiation hazard reporting is required
- [ ] 27l. Authorization to change orbit location
- [ ] 27m. Authorization to perform fleet management
- [ ] 27n. Authorization to extend milestones
- [ ] 27o. Other

Environmental Policy

28a. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307?

( ) Yes (•) No ( ) N/A

If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 CFR §§ 1.1308 and 1.1311, as an exhibit to this application.

*

28b. A Radiation Hazard Study must acompany all applications for new transmitting facilities, major modifications, or major amendments.

*

Alien Ownership

29. Is the Applicant a foreign government or the representative of any foreign government?

( ) Yes (•) No

30. Is the Applicant an alien or the representative of an alien?

( ) Yes ( ) No (•) N/A

31. Is the Applicant a corporation organized under the laws of any foreign government?

( ) Yes ( ) No (•) N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

( ) Yes ( ) No (•) N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one−fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

( ) Yes ( ) No (•) N/A

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the Applicant, and the percentage of stock they own or vote.

*

Basic Qualifications

35. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?

( ) Yes (•) No

36. Has the Applicant, or any party to this Application or amendment, or any party directly or indirectly controlling the Applicant ever been convicted of a felony by any state or federal court?

( ) Yes (•) No

37. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition?

( ) Yes (•) No

38. Is the Applicant, or any person directly or indirectly controlling the Applicant, currently a party in any pending matter referred to in the preceding two items?

( ) Yes (•) No

39. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.

*

☐ 40. Anti-drug

- The Applicant certifies that neither it nor any other party to the application is subject to a denial of Federal benefits, including FCC benefits, pursuant to section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. *See* 47 CFR § 1.2002(b) for the meaning of "party of application" for these purposes. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, or to Federal State or local governmental entities or subdivisions thereof. *See* 47 CFR § 1.2002(c).
- The Applicant certifies that all of its statements made in this Application and in the attachments or documents incorporated by reference are material, are part of this Application, and are true, complete, correct, and made in good faith.

41. Application Description

See Narrative.

42. Geographic service certification

◉ (A) By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

○ (B) By Selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

○ (C) By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

Attachments/Confidential Treatment of Attachments

*43. Is the Applicant requesting confidential treatment of an attachment(s) under section 0.459 of the Commission's rules? ?

○ Yes ◉ No

Attachment No.	File Name	Description of Attachment	Confidential	Action
1	Exhibit B - 1.8 m Antenna Gain Patterns.pdf	Form Attachment	☐	✖
2	Exhibit A - ViaSat-3 SAN Exhibit A Technical Analysis.pdf	Form Attachment	☐	✖
3	Narrative - ViaSat-3 SAN Application Description.pdf	Form Attachment	☐	✖
4	Exhibit C - 28 GHz Coordination Report - Des Moines IA - February 2026.pdf	Form Attachment	☐	✖
5	Exhibit D - 2.4 m RF Hazard Analysis.pdf	Form Attachment	☐	✖
6	Des Moines IA Contour.zip	Form Attachment	☐	✖

Certification

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Party Authorized to Sign

*First Name: Daryl

MI: T

*Last Name: Hunter

Suffix:

*Title: CTO, Regulatory Affairs

*Signature: Daryl T Hunter

Date:

FAILURE TO SIGN THIS FORM MAY RESULT IN DISMISSAL
OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE
BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001),
AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT
(U.S. Code, Title 47, Section 312(a)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503)

☐ Allow Internal Users to View Draft if in Draft State

Exhibit A

Technical Analysis

Viasat submits the following showing to demonstrate that the proposed gateway-type earth station, or satellite access node ("SAN"), located in Polk County, IA, is compatible with Upper Microwave Flexible Use Service ("UMFUS") operations in accordance with Section 25.136(a)(4) and therefore should be authorized with the rights and protections afforded by Section 25.136(a).

The Viasat SAN antenna is configured to operate with the ViaSat-3-class satellite at 88.9 W.L., and this configuration provides the relevant operational azimuth and elevation angles. The antenna parameters used in the analysis are identified in the FCC Form 312 application and supporting exhibits and reflect measured gain patterns for the proposed earth station antenna.

A. Computation of pfd Contour

In most cases, terrain and objects on the Earth's surface provide for additional attenuation of the signal emitted from the earth station antenna in the direction of the horizon around the earth station over and above the expected free space and atmospheric attenuation. The additional attenuation of the radio frequency signal from terrain and surface features further reduces the power flux density (pfd) of the region around the SAN antenna.

To determine whether terrain or surface obstructions around the SAN antenna would provide any further reduction of the pfd at a 10 meter reference height, an analysis was performed using Recommendation ITU-R P.452.[1] Recommendation P.452, Prediction procedure for the evaluation of interference between stations on the surface of the Earth at frequencies above about 100 MHz, provides a propagation model and methodology for computing signal attenuation based on input parameters. In the computation of the contour, the attenuation above free space in the vicinity of the earth station is strongly driven by terrain and surface features rather than by atmospheric effects. To accurately predict the expected attenuation, LIDAR surface data with 1 meter resolution from Intermap was used to provide both clutter height and terrain information.

The computation of the contour around the antenna used the nominal input power density to the SAN antenna along with measured antenna gain information to determine the e.i.r.p. density along a particular azimuth. Next, path and clutter/terrain losses were taken into consideration for all the locations around a SAN site along with polarization discrimination to determine which blocks around the SAN site exceed the -77.6 dB(mW/(m^2 * MHz)) limit at the 10 meter reference height.

Finally, once the analysis is completed, a GIS shape file of the resulting contour is created for import into Viasat's ArcGIS tool and can be examined with respect to population and

[1] In previous applications submitted in accordance with Section 25.136 of the Commission's rules, Viasat utilized the NTIA Irregular Terrain Model ("ITM") —an approach that the Commission has approved, and which also could have been used in the case of the instant application with similar results.

other elements of Section 25.136. An illustration of the contour is included below as Figure 1, and is also included in a .kmz file attached separately in ICFS.

B. Satisfaction of Section 25.136 Criteria

a. Section 25.136(a)(4)(i)

The earth station location is in Polk County, IA. A search of the ICFS database indicates that there are no other earth stations licensed in the 27.5-28.35 GHz band segment in that county.

Therefore, the earth station satisfies the requirement in Section 25.136(a)(4)(i) that there be no more than two other earth stations operating or authorized to operate in the 27.5-28.35 GHz band within the county on a protected basis under Section 25.136.

b. Section 25.136(a)(4)(ii)

The total population covered by the -77.6 dB(mW/(m^2 * MHz)) contour is below the applicable threshold specified in Section 25.136(a)(4)(ii).

Overlaying the -77.6 dB(mW/(m^2 * MHz)) contour on a map depicting census blocks, Viasat has calculated an estimate of the population covered by the contour using 2020 census data and assuming that the population coverage within a partially covered census block is equal to the percentage of the geographic area of the census block covered by the contour.[2] Figure 1 below contains a diagram depicting the contour overlaid on a census block map.

[2] This approach to estimating population coverage using the most recently available decennial census block data and the actual area method is consistent with the recommended approach in the Commission's updated guidance regarding earth station siting. *See 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*, DA 25-206 (rel. Mar. 10, 2025) ("2025 Siting Guidance").

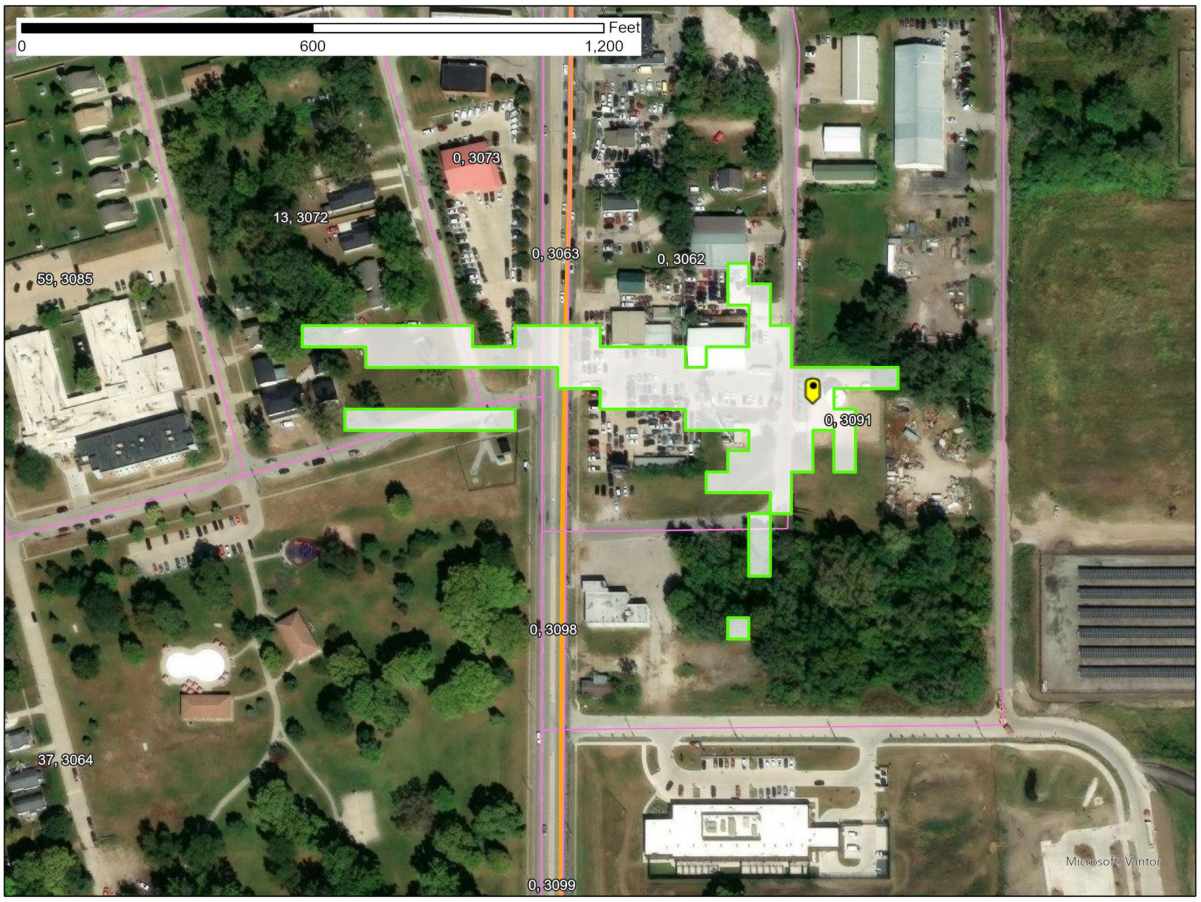

Figure 1 – Des Moines, IA SAN -77.6 dB(mW/(m2 * MHz)) pfd contour

The population of Polk County is 492401, and thus the applicable population limit under Section 25.136(a)(4)(ii) is 492.

The following identifies the census block, population and the population coverage estimate as determined by the actual area method currently on file for this earth station.

Census Block Number	Total Population of Census Block	Population Coverage Estimate	Percent of Block Covered by Pattern
191530052003063	0	0	8.70%
191530052003073	0	0	4.50%
191530052003072	13	1	6.38%
191530052003062	0	0	18.60%
191530052003091	0	0	3.96%
191530052003064	37	0	0.25%

Total Estimated Population Coverage:		1	

Table 2 – Population Coverage Overview

The total estimated population covered by the contour thus is below the applicable population limit.

c. Section 25.136(a)(4)(iii)

The -77.6 dB(mW/(m2 * MHz)) contour does not contain any major event venue, urban mass transit route, cruise ship port, or any road identified as an Interstate, Other Freeway and Expressway, or Other Principal Arterial road in the Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System map.[3] Viasat notes that the contour does appear to have a potential *de minimis* incursion onto a restricted roadway. However, for the reasons discussed below such incursion is unlikely to result in harmful interference.

The Commission's guidance regarding the computation of PFD contours and protection zones recognizes that applicants will need to use a propagation model for the proposed earth station taking into account terrain, clutter, and shielding.[4] As a practical matter, demonstrating compliance with Section 25.136 requires the use of propagation models and assumptions, which by their nature are predictive and yield an approximation of the actual contour at a particular location. Although there necessarily would be some variation between predicted and actual contours, because Viasat has selected a conservative propagation model, the actual contour is likely to be smaller than the predicted contour reflected in this Technical Analysis.

Moreover, it is unclear that the proposed deployment would create any issue under Section 25.136 given that any potential incursion on the roadway would be *de minimis* in nature; consequently, any coverage by the actual contour is unlikely to translate into any detectable interference to UMFUS operations. A terrestrial wireless user traveling in a vehicle likely would pass through the overlapping area in an extremely short period of time and would be unlikely to detect any degradation of service.

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[3] *See* Federal Highway Administration, Office of Planning, Environment, and Realty Executive Geographic Information System Map, *available at* https://hepgis.fhwa.dot.gov/fhwagis/#; *see also Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Second Report and Order, 32 FCC Rcd 10988, App'x B (2017) ("[T]he roads listed in the revision to Section 25.136 . . . can readily be identified by consulting the Federal Highway Administration (FHWA) Office of Planning, Environment, and Realty Executive Geographic Information System (HEPGIS) map . . . . 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).

[4] 2025 Siting Guidance at 2.

No actual interference is likely to result based on the predicted contour. However, Viasat would accept a license condition on operations at this location in the 27.5-28.35 GHz band to take corrective action upon receipt of any complaint of actual interference occurring in the portions of the roadway that lie inside the actual -77.6 dBm/m2/MHz PFD contour at ten meters above ground level.[5]

To the extent the Commission finds that a waiver of Section 25.136(a)(4)(iii) for the predicted contour illustrated in this Exhibit A is necessary in order to allow a grant of the application, Viasat requests such a waiver. Good cause exists for the Commission to grant the requested waiver.[6] As discussed above, the actual contour generated at the earth station location is unlikely to reach the restricted roadway. In addition, to the extent there is any *de minimis* overlap of the actual contour with the roadway, any interference is unlikely to be detectible by users, and Viasat would commit to taking necessary action to resolve any actual interference that may occur on the roadway at issue. Therefore, grant of the requested waiver "would not undermine the policy objective of the rule in question."[7] Notably, the Commission has granted waivers of Section 25.136(a)(4)(iii) under similar circumstances, including to Viasat.

d. Section 25.136(a)(4)(iv)

As required under Section 25.136(a)(4)(iv) and Section 101.103 of the Commission's rules, Viasat initiated coordination with terrestrial licensees within the area covered by the -77.6 dB(mW/(m^2 * MHz)) contour with respect to existing facilities constructed and in operation by the UMFUS licensees. The Prior Coordination Notice ("PCN") was sent by Comsearch on January 12, 2026. The Comsearch coordination report is attached as Exhibit C.

On February 5, 2026, Viasat received a response from Verizon. Although Verizon characterized its response as an "objection," Verizon failed to provide a technical basis for such "objection," and more specifically failed to include technical information supporting its position as required under Section 101.103(d)(2)(iv) of the Commission's rules. Instead, Verizon merely noted the location of various Verizon facilities operating within the 28 GHz band and in the general vicinity of the proposed Viasat earth station.[8]

Notwithstanding Verizon's failure to satisfy the clear requirements of Section 101.103(d)(2)(iv), Viasat reviewed the locations identified by Verizon and confirmed that none of the identified sites fell within the -77.6 dBm/m2/MHz PFD contour for the proposed earth station.

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5 *See, e.g.*, HNS License Sub, LLC, Call Sign E170169, ICFS File No. SES-LIC-20170807-00894, Condition 900592 (granted May 15, 2020).

6 *See* 47 C.F.R. § 1.3.

7 *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990); s*ee also Fugro-Chance, Inc.*, 10 FCC Rcd 2860, at ¶ 2 (1995) (waiver of U.S. Table of Frequency Allocations appropriate "when there is little potential for interference into any service authorized under the Table of Frequency Allocations and when the non-conforming operator accepts any interference from authorized services.").

8 Certain information provided by Verizon during coordination is redacted in the public version of this Exhibit A.

Viasat asked Verizon to provide more detailed technical information to explain the nature of its concerns.

On February 11, 2026, Verizon responded and claimed that Viasat's earth station would cause interference to Verizon because it "uses a PFD signal interference threshold of -118.6 dBW/m^2/MHz (-88.6 dBmW/m^2/MHz) for Verizon 28GHz network deployments" such that Viasat's proposed earth station would allegedly "fail coexistence." Critically, Verizon did not allege or demonstrate that Viasat's operations would result in an exceedance of the applicable -77.6 dBmW/m^2/MHz interference threshold specified in the Commission's rules—*i.e.*, Verizon in no way demonstrated that Viasat had caused *cognizable, harmful* interference.

Verizon has provided *no* justification for its attempts to apply a bespoke -88.6 dBmW/m^2/MHz threshold that is inconsistent with the Commission's framework for coexistence between terrestrial and satellite operations in the 27.5-28.35 GHz band. Under the plain language of Section 25.136(a)(4)(iv), an earth station applicant must complete frequency coordination with "the UMFUS licensees within the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to -77.6 dBmW/m^2/MHz with respect to existing facilities constructed and in operation by the UMFUS licensee." But Verizon bases its "analysis" on a threshold that is 11 dB more stringent than what is required by Section 25.136.[9] This is inherently unreasonable and the Commission should reject Verizon's collateral attack on the longstanding coexistence framework embodied in Section 25.136.

Critically, if the *proper* interference threshold is used, there is no overlap of Viasat's contours with Verizon's fixed locations. This is illustrated in Figure 3 below, in which Viasat plotted the relevant Verizon 28 GHz network locations on a satellite image with the -77.6 dBmW/m^2/MHz PFD contour for Viasat's earth station:

[9] Notably, the Commission adopted the -77.6 dBm/m2/MHz threshold in the *Spectrum Frontiers* proceeding after developing a substantial record with input from both satellite and terrestrial interests. Allowing Verizon to circumvent the resulting framework by establishing an arbitrarily low protection threshold for coordination would render the -77.6 dBm/m2/MHz threshold meaningless and eviscerate the carefully considered rules adopted in *Spectrum Frontiers*.

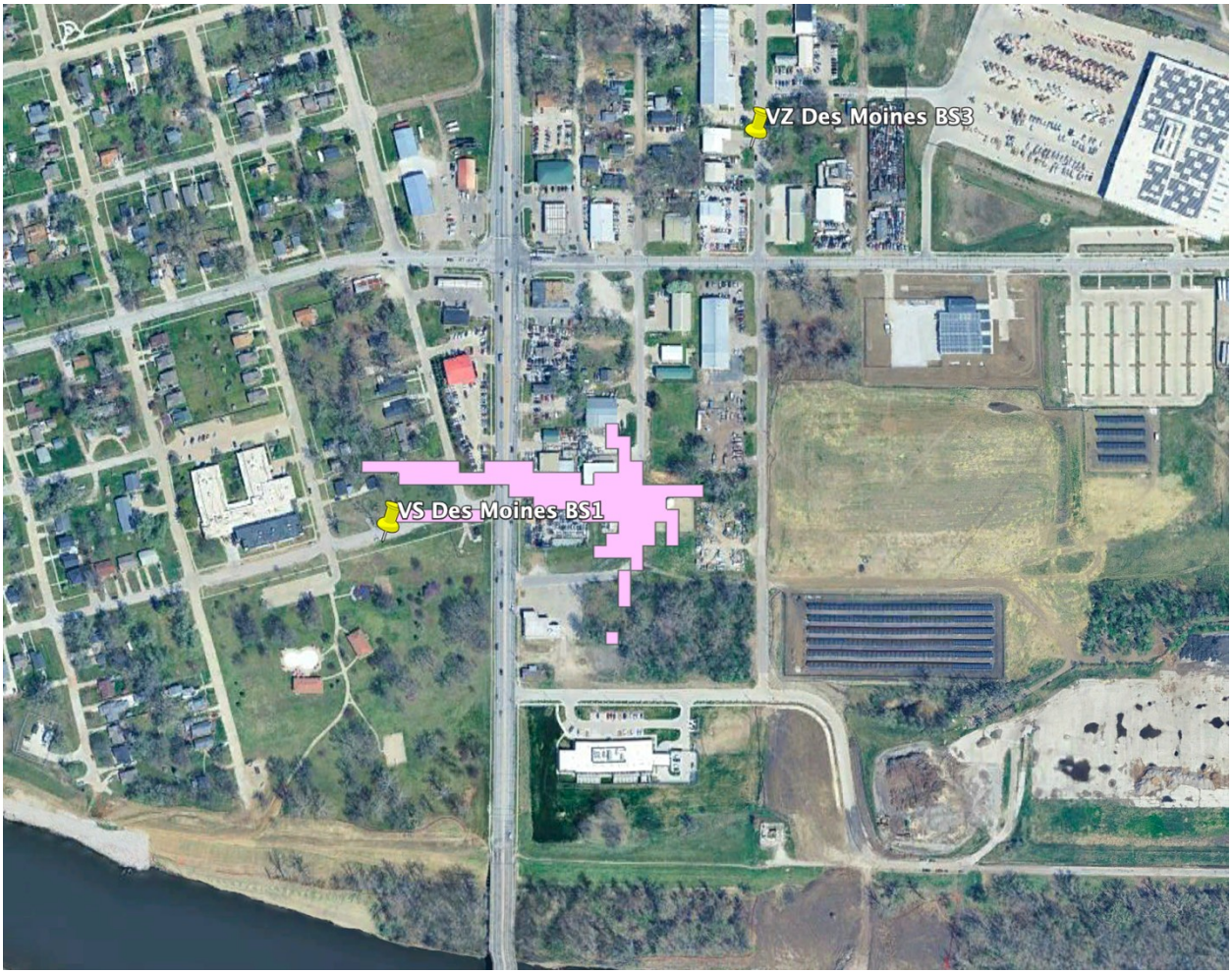

Figure 3 - Des Moines, IA SAN -77.6 dB(mW/(m2 * MHz)) pfd contour and Verizon BS in Yellow Pins.

As seen in Figure 3 there is no overlap between the PFD contours and the sites identified by Verizon during coordination.

In short, Viasat has made every effort to complete coordination of the proposed earth station. In stark contrast, Verizon has failed to coordinate in good faith. The Commission should not countenance Verizon's obstructionist efforts and should instead find that Viasat has satisfied its coordination obligations with respect to the proposed site.

Exhibit B – 2.4 m Antenna Gain Patterns

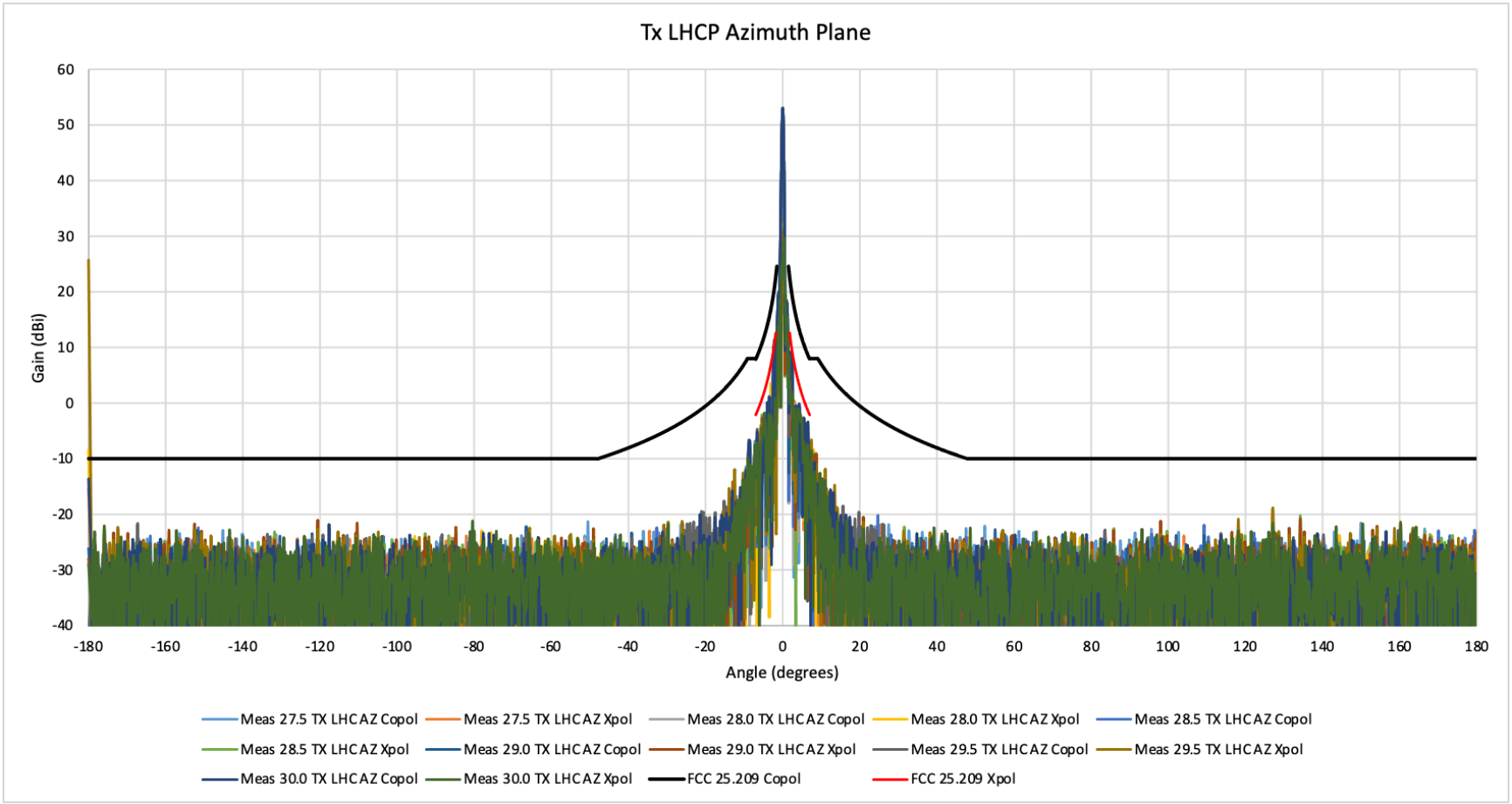

Figure 1 Tx LHCP Azimuth Plane Wide Cut

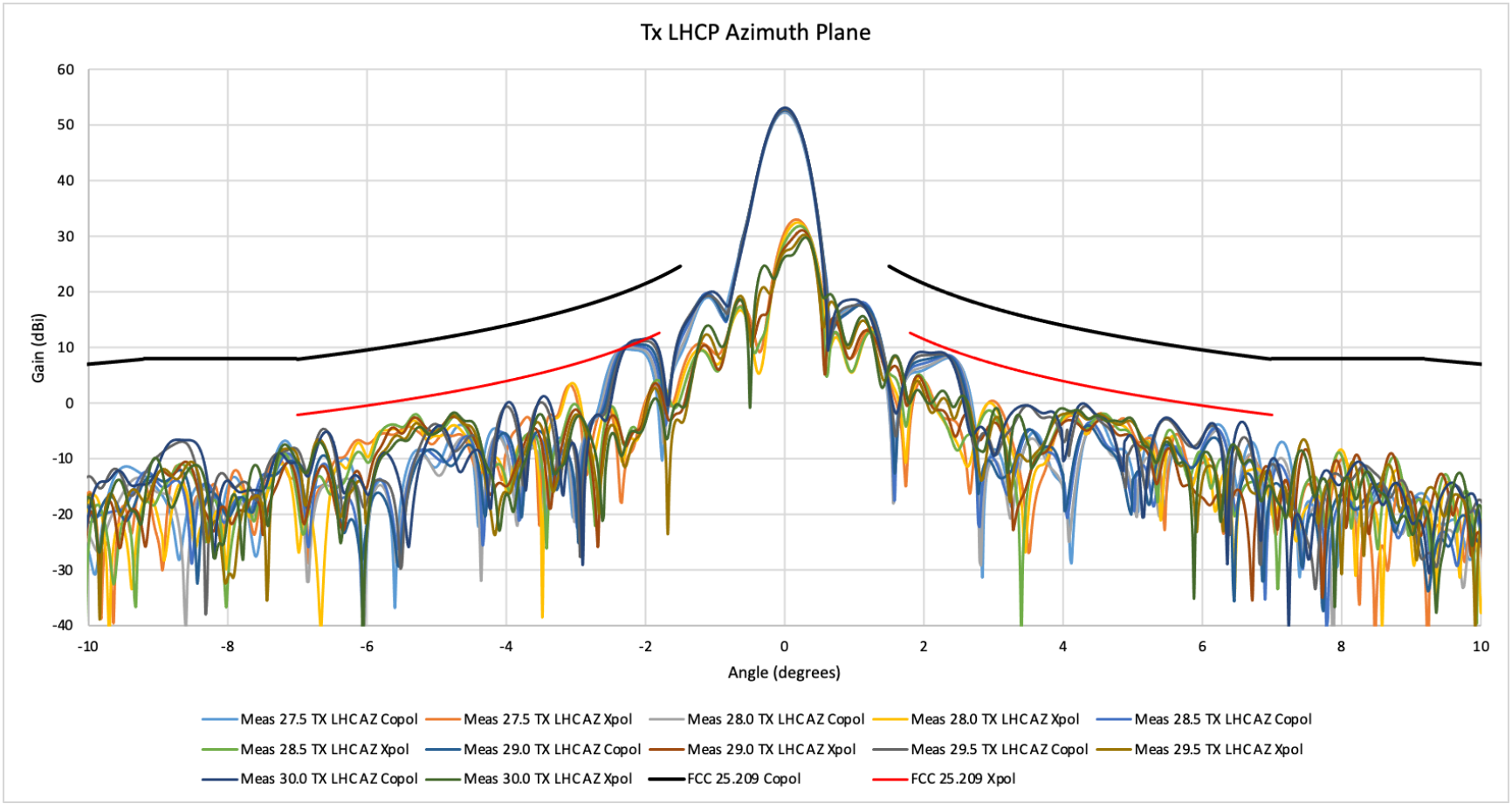

Figure 2 Tx LHCP Azimuth Plane Narrow Cut

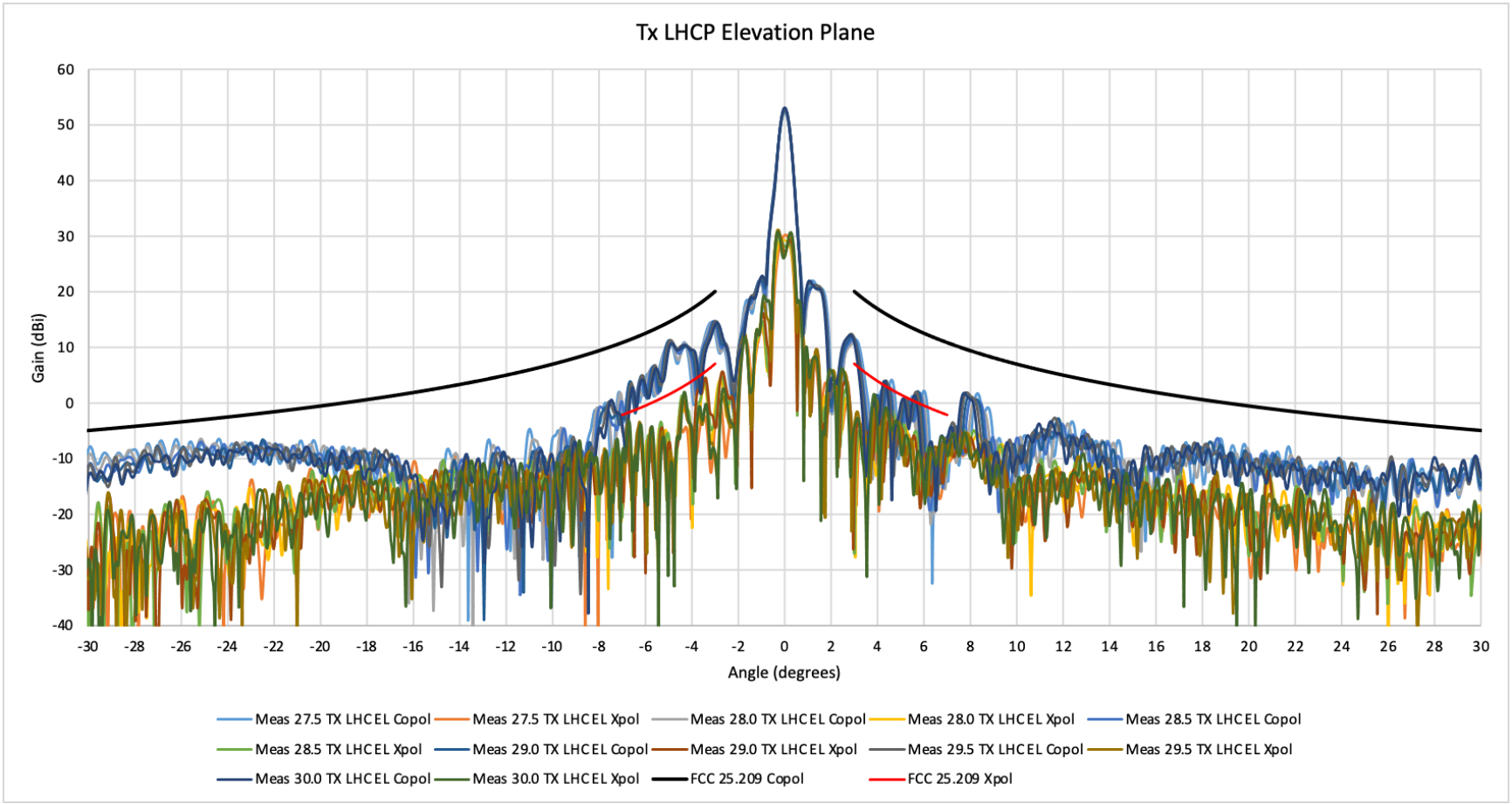

Figure 3 Tx LHCP Elevation Plane Wide Cut

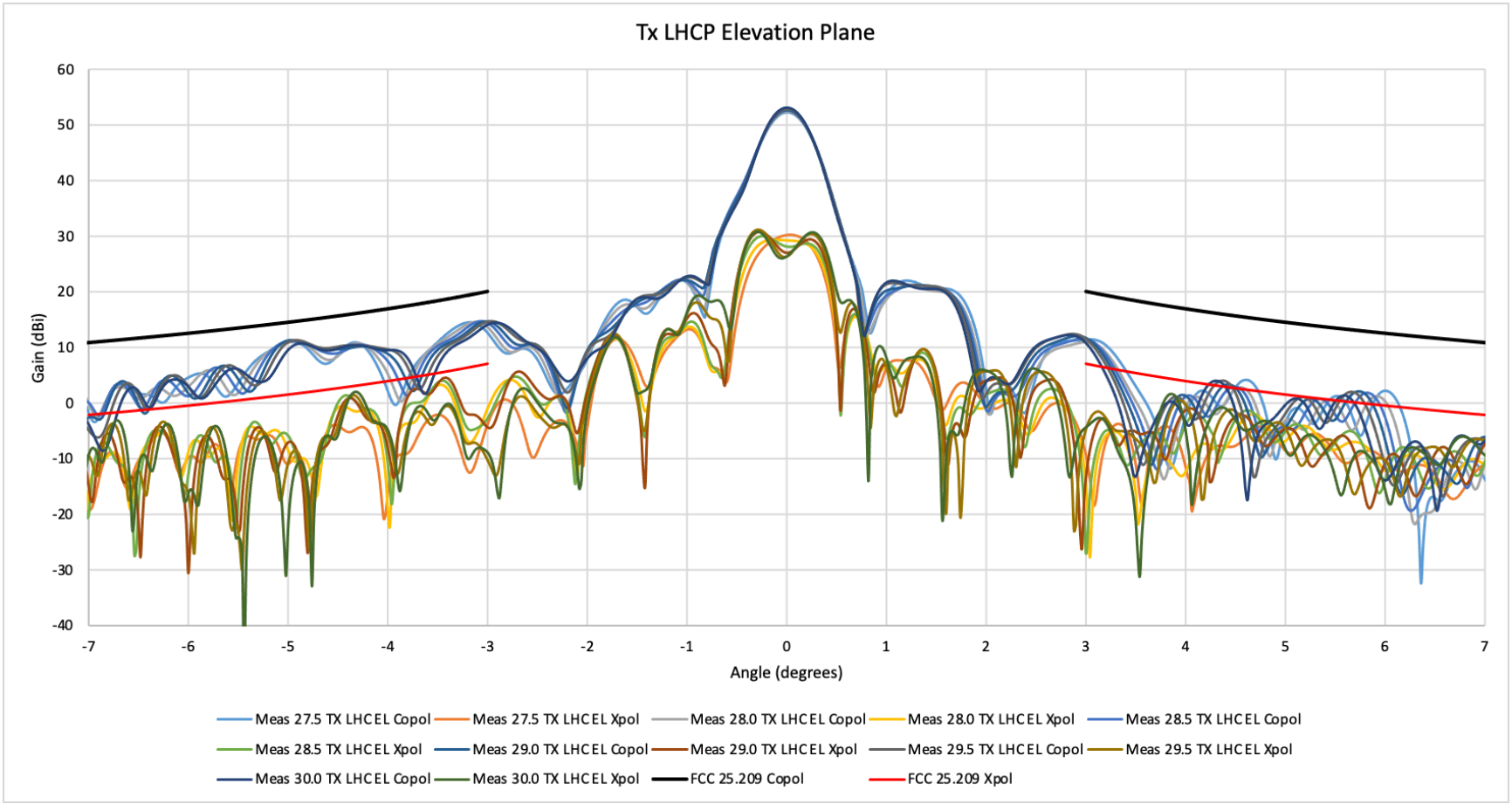

Figure 4 Tx LHCP Elevation Plane Narrow Cut

Ka-Band Earth Station – Des Moines, IA

Frequency Coordination Report

28 GHz

Prepared on Behalf of
ViaSat, Inc.

February 6, 2026

comsearch®
an ANDREW company

Table of Contents

1. Summary of Results

On behalf of ViaSat. Inc., Comsearch issued a coordination notice under Section 25.203(c) and Section 25.136(a)(4) of the FCC's rules for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Des Moines-IA, which will transmit at 28 GHz[1]. Prior notification emails were sent to the licensees, and a copy of the notification data is provided in section three of this report.

Verizon objected to the PCN on February 5, 2026, and the issue remains unresolved.

2. 28 GHz UMFUS Coordination

All 28 GHz UMFUS licensees within the coordination distance of the proposed earth station were identified. The proposed earth station will operate on frequencies that overlap Channel L1 & L2 of the UMFUS service. The total frequency allocation for Channels L1 & L2 of the UMFUS spectrum appears below.

Channel: **L1** 27.500 - 27.925 GHz
L2 27.925 - 28.350 GHz

Licensee	Authorized Geographic Area
Verizon	Market Based

Verizon objected to the PCN on February 5, 2026, and the issue remains unresolved.

[1] The proposed earth station will operate in the 27.5 – 29.1 GHz & 29.5 – 30.0 GHz portion of the Ka-Band.

3. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Des Moines, IA. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

Date:		01/12/2026	
Job Number:		260112COMSNR04	
Administrative Information			
Status		ENGINEER PROPOSAL	
Call Sign			
Licensee Code		VIASAT	
Licensee Name		ViaSat, Inc	
Site Information		**DES MOINES, IA**	
Venue Name			
Latitude (NAD 83)		41° 34' 46.17" N	
Longitude (NAD 83)		93° 35' 43.53" W	
Climate Zone		A	
Rain Zone		2	
Ground Elevation (AMSL)		240.8 m / 790.0 ft	
Link Information			
Satellite Type		Geostationary	
Mode		TO - Transmit-Only	
Modulation		Digital	
Satellite Arc		78° W to 91° West Longitude	
Azimuth Range		157.2° to 176.1°	
Corresponding Elevation Angles		39.4° / 41.9°	
Antenna Centerline (AGL)		1.5 m / 4.9 ft	
Antenna Information		**Transmit - VES001**	
Manufacturer		VIASAT INC.	
Model		13001XX	
Gain / Diameter		52.6 dBi / 2.4 m	
3-dB / 15-dB Beamwidth		0.40° / 0.80°	
Max Available RF Power	(dBW/4 kHz)	-34.0	
	(dBW/MHz)	-10.0	
Maximum EIRP	(dBW/4 kHz)	18.6	
	(dBW/MHz)	42.6	
Interference Objectives:	Long Term	-141.0 dBW/4 kHz	20%
	Short Term	-118.0 dBW/4 kHz	0.0025%
Frequency Information		**Transmit 28.0 GHz**	
Emission / Frequency Range (MHz)		464MG7D / 27500.0 - 29500.0	
Coordination Distance		4 km / 2.48 mi	

4. Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

Contact person:	Naveen Raghavan
Title:	Engineering Program Manager
Company:	Comsearch
Address:	21515 Ridgetop Circle, Sterling, VA 20166
Telephone:	703-726-5648
Email:	nraghavan@Comsearch.com
Website:	www.comsearch.com

Exhibit D

Analysis of Non-Ionizing Radiation for a Viasat 2.4 m Ka-band Earth Station Antenna System

This report analyzes the non-ionizing radiation levels for a 2.4 m earth station antenna system. The analysis method uses principally the formulae in FCC Office of Engineering Technology Bulletin No. 65 but replaces formula (13) of OET-65 with the updated near field power density formula from Table D.5 of the IEEE C95.3-2021 Standard as requested by FCC/OET staff.

The FCC's Office of Engineering Technology's Bulletin No. 65 specifies that there are two separate tiers of exposure limits that are dependent upon the situation in which the exposure takes place and/or the status of the individuals who are subject to the exposure. The two tiers are General Population / Uncontrolled environment, and an Occupational / Controlled environment.

The applicable exposure limit for the General Population / Uncontrolled environment, *i.e*., areas that people may enter freely, at this frequency of operation is 1 mW/cm^2 average power density over a 30-minute period.

The applicable exposure limit for the Occupational / Controlled environment, *i.e.*, areas that only authorized / trained personnel have access to, at this frequency of operation is 5 mW/cm^2 average power density over a 6-minute period.

Summary of expected radiation levels for a 2.4 m Ka-band antenna in an Uncontrolled Environment when operating at 30 GHz with a 100 W PA

Region	Maximum Power Density	Hazard Assessment
Far field (R_{ff}) = 405.9 m	0.81 mW/cm^2	Satisfies FCC MPE
Near field (R_{nf}) = 169.1 m	21.71 mW/cm^2	Potential Hazard
Transition region (R_t) (R_t) = $R_{nf} < R_t < R_{ff}$	21.71 mW/cm^2	Potential Hazard
Main Reflector Surface ($S_{surface}$)	6.95 mW/cm^2	Potential Hazard

Although the power density level is greater than 1 mW/cm^2 at the reflector surface, near field, and transition region of the projected RF cylinder, these areas are not accessible by the General Population. The earth station enclosure limits access by the General Population in the area immediately around the antenna and the RF cylinder is well above head height outside the earth station enclosure where the General Population / Uncontrolled Environment is present.

Summary of expected radiation levels for a 2.4 m Ka-band Antenna in a Controlled Environment when operating at 30 GHz with a 100 W PA

Region	Maximum Power Density	Hazard Assessment
Far field (R_{ff}) = 405.9 m	0.81 mW/cm^2	Satisfies FCC MPE
Near field (R_{nf}) = 169.1 m	21.71 mW/cm^2	Potential Hazard
Transition region (R_t) (R_t) = $R_{nf} < R_t < R_{ff}$	21.71 mW/cm^2	Potential Hazard
Main Reflector Surface ($S_{surface}$)	6.95 mW/cm^2	Potential Hazard

Although the power density level is greater than 5 mW/cm^2 at the near field and transition region of the projected RF cylinder, access to the earth station enclosure will be limited to trained personnel and only when the transmitted is not turned on. Additionally, the transition region begins outside the earth station enclosure and is well above head height for Controlled Environments.

The power density level in the area between the feed and the reflector surface is greater than the reflector surface and is assumed to be a potential hazard.

Conclusions

The proposed earth station system will be located in an enclosure that provides for an environment with controlled access and will be serviced by trained personnel. The enclosure has RF Exposure caution signage posted at the entry gate and each side. Only trained personnel will operate the transmitting system during normal operation or testing. No access to the reflector/feed or near field areas will be permitted when the transmitter is turned on and the transition region begins well above head height even when the transmitter is turned on. Based on the above analysis it is concluded that no hazard exists for Occupational staff or the General Population when the system is being operated.

Analysis of 2.4 m antenna for operation at 30 GHz

The analysis and calculations that follow in this report are performed in compliance with the methods described in the OET Bulletin No. 65 except where noted and as directed by FCC staff.

Definition of terms

The terms are used in the formulas here are defined as follows:

$S_{surface}$ = maximum power density at the antenna surface
S_{nf} = maximum near-field power density
S_t = power density in the transition region
S_{ff} = power density (on axis)
R_{nf} = extent of near-field
R_{ff} = distance to the beginning of the far-field
R = distance to point of interest

P_a = 100 W	maximum power amplifier output
L_{fs} = 0.7 dB	loss between power amplifier and antenna feed
OBO = 0 dB	operating PA output back off
P = 85.1 W	power fed to the antenna in Watts
A = 4.9 m^2	physical area of the aperture antenna
G = 165403.3	power gain relative to an isotropic radiator
D_{maj}, D_{min} = 2.6 m x 2.4 m	major, minor axis diameter of reflector
D_{eff} = 2.5	effective diameter of elliptical antenna in meters
F = 30000	frequency in MHz
= 0.01 m	wavelength in meters (~$300/F_{MHz}$)
= 0.27	aperture efficiency

Antenna Surface. The maximum power density directly in front of an antenna (e.g., at the antenna surface) can be approximated by the following equation:

$S_{surface}$ = (4 * P) / A (1.1)

= (4 * 85.1 W) / 4.9 m^2

= 6.95 mW/cm^2

Near Field Region. In the near-field or Fresnel region, of the main beam, the power density can reach a maximum before it begins to decrease with distance. The extent of the near field can be described by the following equation **(D** and in same units):

R_{nf} = D_{eff}^2 / (4 *) (1.2)
= (2.5 m)^2 / (4 * 0.01 m)
= 169.1 m

The magnitude of the on-axis (main beam) power density varies according to location in the near field. The following equation is used at the request of FCC/OET staff in lieu of OET-65 equation 13[1]:

S_{nf} = (16 * P) / (* * D_{eff}^2) (1.3)

= (16 * 85.1 W) / (* 0.27 * (2.5 m)^2)

= 21.71 mW/cm^2

Transition Region. Power density in the transition region decreases inversely with distance from the antenna, while power density in the far field (Fraunhofer region) of the antenna decreases inversely with the ***square*** of the distance. The transition region will then be the region extending from R_{nf} to R_{ff}. If the location of interest falls within this transition region, the on-axis power density can be determined from the following equation:

S_t = (S_{nf} * R_{nf}) / R (1.4)

= (21.71 mW/cm^2 * 169.1 m) / R

= (3.67x 10^3 m * mW/cm^2) / R where R is the location of interest in meters

Far-Field Region. The power density in the far-field or Fraunhofer region of the antenna pattern decreases inversely as the square of the distance. The distance to the start of the far field can be calculated by the following equation:

R_{ff} = (0.6 * D_{eff}^2) / (1.5)

= (0.6 * (2.5 m)^2) / 0.01 m

= 405.9 m

The power density at the start of the far-field region of the radiation pattern can be estimated by the equation:

S_{ff} = (P * G) / (4 * * R_{ff}^2) (1.6)

= (32.4 W * 165403.3) / (4 * * (405.9 m)^2)

= 0.81 mW/cm^2

[1] Derived from Table D.5 of IEEE Std C95.3-2021

Attachment 1
NARRATIVE EXHIBIT
(Response to Question 43)
Ka-Band Earth Station (Site-Based Authority)

Viasat, Inc. ("Viasat") seeks authority to operate an individually licensed fixed-satellite service ("FSS") earth station in the 17.7-18.3 GHz and 27.5-28.35 GHz band segments with the ViaSat-3 class satellite at 88.9º W.L. (referred to as "ViaSat-3F1").[1] Grant of this application is in the public interest because it would authorize the deployment of an earth station that would serve as an interconnection point for the ViaSat-3F1 network (which the Commission has already authorized to serve the United States and thus found to be in the public interest).[2]

I. COMPATIBILITY WITH CO-FREQUENCY OPERATIONS

Operations of the earth station would be consistent with the technical parameters specified in the attached FCC Form 312 and Schedule B and would be compatible with co-frequency operations—including adjacent geostationary orbit ("GSO") systems, Upper Microwave Flexible Use Service ("UMFUS") operations, fixed service operations, and broadcasting-satellite service ("BSS") feeder link Earth-to-space transmissions.[3]

A. GSO Operations

In seeking authority for the ViaSat-3F1 satellite, Viasat demonstrated two-degree compatibility in the 17.7-18.3 GHz and 27.5-28.35 GHz band segments.[4]

The antenna gain patterns with the Section 25.209 limits superimposed are included as Exhibit B. The earth station complies with the antenna performance standards in Sections 25.209(a) and (b) for all off-axis angles.

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[1] Viasat has separately requested authority to operate this earth station terminal type in the 18.3-19.3 GHz, 19.7-20.2 GHz, 28.35-29.1 GHz, and 29.5-30.0 GHz band segments on a blanket basis. *See* Viasat, Inc., Call Sign E202143, ICFS File No. SES-LIC-20200811-00852. The earth station in this application would also operate under that blanket license once it is granted.

[2] *See* Viasat, Inc., Call Sign S2917, ICFS File Nos. SAT-LOI-20140204-00013 *et al.* ("VIASAT-3"); Call Sign S3050, ICFS File No. SAT-LOA-20190617-00048 (granted May 27, 2020) ("VIASAT-89US"). VIASAT-3 and VIASAT-89US are collectively referred to as "ViaSat-3F1" herein.

[3] Non-geostationary orbit ("NGSO") systems in the 27.5-28.35 GHz band segment operate on an unprotected, noninterference basis with respect to GSO FSS. *See Update to Parts 2 and 25 Concerning Non- Geostationary, Fixed-Satellite Service Systems and Related Matters*, 32 FCC Rcd 7809, at ¶ 23 (2017). In the 17.7-18.3 GHz band segments, NGSO systems may not claim interference protection from the GSO FSS. *See* 47 C.F.R. § 25.289.

[4] *See* Viasat, Inc., Call Sign S2917, ICFS File No. SAT-MOD-20190617-00047, Attachment A, at 7-8 ("ViaSat-3F1 Technical Attachment").

B. UMFUS

Viasat would operate the earth station in the 27.5-28.35 GHz band segment consistent with the provisions of Section 25.136 regarding compatibility with UMFUS operations. Specifically, the earth station meets the criteria for protection under Section 25.136(a)(4). The attached Technical Analysis in Exhibit A details the earth station's compliance with these criteria. Therefore, the earth station qualifies to operate without providing interference protection to any UMFUS stations.

C. Fixed Service and BSS

The 17.7-18.3 GHz band segment is allocated on a primary basis for fixed services. The 17.8-18.3 GHz portion of this band segment is allocated for FSS on a secondary basis with respect to fixed services. The 17.7-17.8 GHz portion of the band segment is allocated to FSS on a co-primary basis in the space-to-Earth direction with the BSS subject to the condition that receiving earth stations shall not claim protection from transmissions of non-Federal stations in the fixed service that operate in that band.[5] The 17.7-17.8 GHz portion of the band segment is also allocated to the BSS on a co-primary basis.

In seeking market access for ViaSat-3F1, Viasat demonstrated that its FSS downlinks in the 17.7-18.3 GHz band segment are compatible with primary fixed service operations and neighboring BSS operations.[6] More specifically, Viasat demonstrated that downlink transmissions from ViaSat-3F1 would be within the power-flux density limits at the earth's surface set forth in Article 21 of the ITU Radio Regulations and would not cause harmful interference into primary fixed service operations throughout the 17.7-18.3 GHz band segment.[7] In addition, the half-power beam width of the subject earth station in the 17.8-18.3 GHz band is 0.57 degrees.[8] In the 17.7-17.8 GHz band segment, Viasat seeks to operate on an unprotected, non-interference basis consistent with the Commission's authorization of the ViaSat-3F1 satellite.[9]

II. RADIATION HAZARD ANALYSIS

A radiation hazard analysis for the earth station is attached hereto as Exhibit D. As demonstrated in Exhibit D, the general population would not be exposed to RF levels in excess of the Commission's standard, and the antenna does not present a risk to trained personnel in the controlled area in the immediate vicinity of the antenna.

III. FAA NOTIFICATION

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5 *See* 47 C.F.R. § 2.106 n.NG58(d). *See also* 47 C.F.R. § 25.115(e)(2).

6 *See* ViaSat-3F1 Technical Attachment at 13-16.

7 *See id.* at 6-7.

8 *See* 47 C.F.R. § 25.115(a)(9).

9 *See Viasat, Inc.*, Order and Declaratory Ruling, 35 FCC Rcd 5416, ¶ 32 (2020).

The antenna is exempt from notification to the FAA under Section 17.7(e)(3) of the Commission's rules because the height of the antenna is less than 6.1 meters above ground level.

Site(s) Information

Site Identifier	Des Moines, IL
Contact Name	Jarrett S Taubman
Phone Number	2023835050
Street	928 SE 14th CT
City	Des Moines
County	Polk
State	22a70f0adb6d66008e0b75131f96195f
Zipcode	50317
Area of Operation	41 34 46.02N 093 35 43.06W
Latitude Degrees	41 °
Latitude Minutes	34 '
Latitude Seconds	46.02 "
Latitude Hemisphere	N
Longitude Degrees	93 °
Longitude Minutes	35 '
Longitude Seconds	43.06 "
Longitude Hemisphere	W
Geographic Coordinate System	NAD-83
Site Elevation (AMSL)	240.8 meters
1) If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(	Yes
2) If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS) or if they operate in the I	N/ A
3) Is Frequency Coordination required?	Yes
4) Is coordination with another country required?	No
5) Is FAA notification required?	No
Is facility operated by remote control?	No

Remote Control

Call Sign	Phone Number	Street	City	County	Zip Code	State	Cou

Antenna(s)

Antenna ID	Manufacturer	Model	Antenna Size	Minor Axes (meters)	Major Axes (meters)	Maximum Antenna Height Above Ground Level (meters)	Maximum Antenna Height Above Mean Sea Level (meters)	Building Height Above Ground Level (meters)	Maximum Antenna Height Above Rooftop (meters)	Total Input Power at Antenna Flange for All Carriers (Watts)
Site Id: Des Moines, IL (1 item)										
SAN 1	Viasat, Inc	13001XX	2.4 meters	2.4 meters	2.6 meters	1.5 meters	242.3 meters	0 meters	0 meters	85.1 Watts

Frequency Band(s)

Frequency Lower (MHz)	Frequency Upper (MHz)	Direction of Transmission	Gain	At	Polarization	Polarization	Polarization
Site Id: Des Moines, IL - Antenna Id: SAN 1 (2 items)							
27500 MHz	28350 MHz	Earth- to- Space	52.4 dBi	28 GHz	Left Hand Circular	-- None --	-- None --
17700 MHz	18300 MHz	Space- to- Earth	48.8 dBi	17.7 GHz	Right Hand Circular	-- None --	-- None --

Operating Particulars(s)

Emission Designator	Maximum EIRP per Carrier (dBW)	Maximum EIRP Density per Carrier (dBW/ 4kHz)	Modulation and Services	Status
Site Id: Des Moines, IL - Antenna Id: SAN 1 - 27500MHz - 28350MHz (2 items)				
464M0G7	69.3 dBW	18.6554201 dBW/ 4kHz	464 MBd digital data carrier	Requested
325MG7D	67.7 dBW	18.6017663 dBW/ 4kHz	325 MBd digital data carrier	Requested
Site Id: Des Moines, IL - Antenna Id: SAN 1 - 17700MHz - 18300MHz (8 items)				
10M0G7D			10 MBd digital data carrier	Requested
40M0G7D			40 MBd digital data carrier	Requested
160MG7D			160 MBd digital data carrier	Requested
464MG7D			464 MBd digital data carrier	Requested
20M0G7D			20 MBd digital data carrier	Requested
5M00G7D			5 MBd digital data carrier	Requested
80M0G7D			80 MBd digital data carrier	Requested
320MG7D			320 MBd digital data carrier	Requested

Point(s) of Communication)

Satellite	Common Name	ITU Name	Orbit Location	Country	Destination
Site Id: Des Moines, IL (1 item)					
ViaSat-3(S2917/3050 | null | 88.9	ViaSat-3(S2917/3050		88.9 W.L.	United States of America	

Satellite Coordination

Satellite Orbit Type	Range of Satellite Arc Eastern Limit	Range of Satellite Arc Eastern Limit Hemisphere	Range of Satellite Arc Western Limit	Range of Satellite Arc Western Limit Hemisphere	Antenna Elevation Angle Eastern Limit	Antenna Elevation Angle Western Limit	Earth Station Azimuth Angle Eastern Limit	Earth Station Azimuth Angle Western Limit
Site Id: Des Moines, IL - Antenna Id: SAN 1 - 27500MHz - 28350MHz (1 item)								
Geostationary	78	W	91	W	39.38	41.89	157.18	176.09

Site Id: Des Moines, IL - Antenna Id: SAN 1 - 17700MHz - 18300MHz (1 item)

Geostationary	78	W	91	W	39.38	41.89	157.18	176.09

Attachments