Kelly McKeon

From: Edwards, Gary <gedwards@comsearch.com>
Sent: Friday, May 21, 2021 4:46 PM
To: Kelly McKeon
Cc: David Liptsyn
Subject: RE: Coordination Report - Antenna Centerline

Hi Kelly,

That small change in the AGL would have minimal impact on the coordination and the calculations involved.

Technically, you would want all of the coordination data filed with the FCC to match what was coordinated. However, there is not a field on the FCC Form 312 Schedule B that asks for the Antenna Centerline as represented in our Coordination notice. The Antenna Centerline in our Coordination notice is theoretically there for someone that is doing an Analysis against the earth station with their own system in the shared band of operation. In most instances, I don't believe this small modification in ACL height would create any changes in someone's Analysis against the earth station.

Hope this helps to answer your question, please feel free to call if you prefer.

Regards,

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Manager, Satellite | Mobility Solutions

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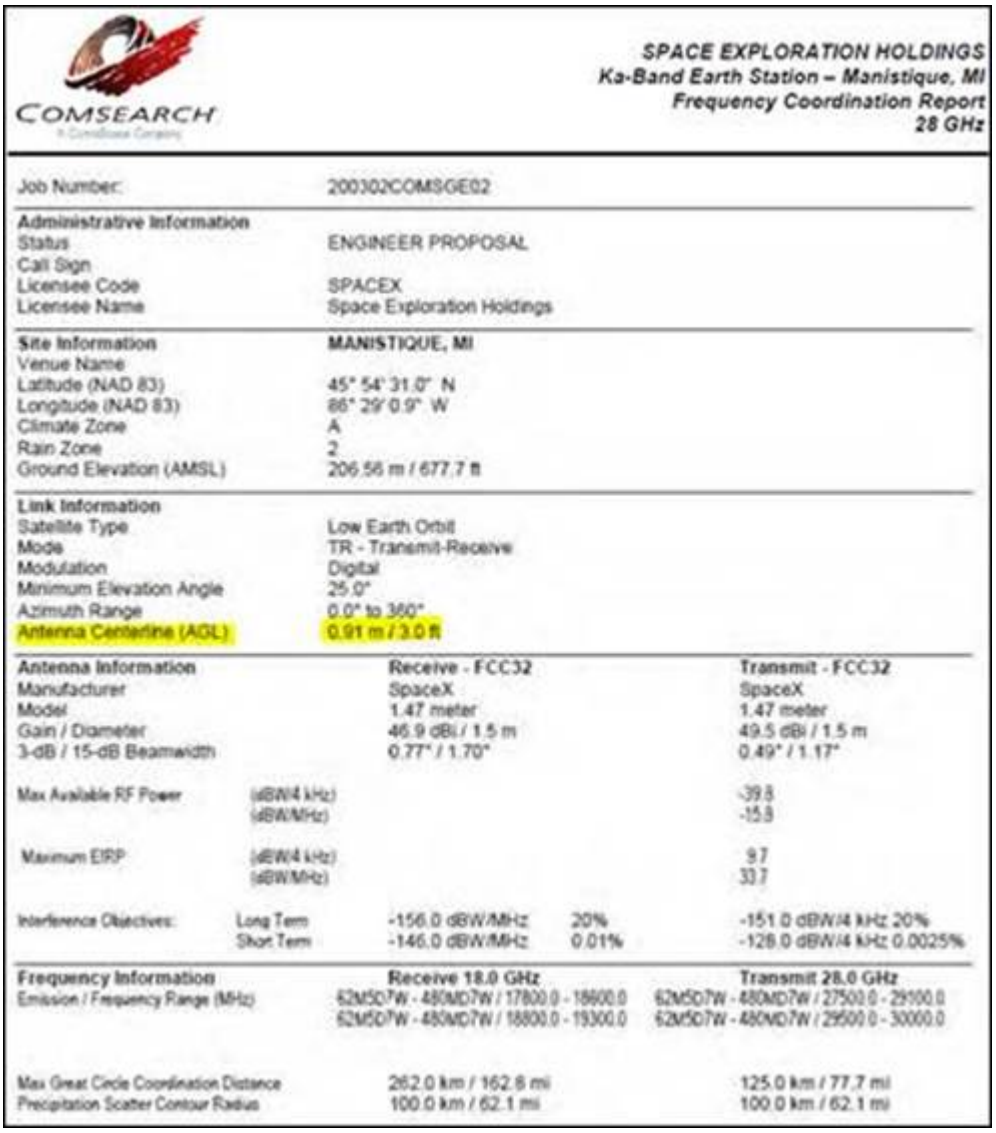
From: Kelly McKeon <Kelly.McKeon@spacex.com>
Sent: Friday, May 21, 2021 6:19 PM
To: Edwards, Gary <gedwards@comsearch.com>
Cc: David Liptsyn <David.Liptsyn@spacex.com>
Subject: Coordination Report - Antenna Centerline

Hi Gary,

Hoping you can help us understand the impact the Antenna Centerline (AGL) has on coordinating.
The current value is 0.91m. If this were to change to 1.7m, what impact, if any, does that have on the coordination report?

Thank you!



COMSEARCH

SPACE EXPLORATION HOLDINGS
Ka-Band Earth Station – Manistique, MI
Frequency Coordination Report
28 GHz

Job Number:	200302COMSGE02			
Administrative Information				
Status	ENGINEER PROPOSAL			
Call Sign				
Licensee Code	SPACEX			
Licensee Name	Space Exploration Holdings			
Site Information	**MANISTIQUE, MI**			
Venue Name				
Latitude (NAD 83)	45° 54' 31.0" N			
Longitude (NAD 83)	86° 29' 0.9" W			
Climate Zone	A			
Rain Zone	2			
Ground Elevation (AMSL)	206.56 m / 677.7 ft			
Link Information				
Satellite Type	Low Earth Orbit			
Mode	TR - Transmit-Receive			
Modulation	Digital			
Minimum Elevation Angle	25.0°			
Azimuth Range	0.0° to 360°			
Antenna Centerline (AGL)	0.91 m / 3.0 ft			
Antenna Information		**Receive - FCC32**		**Transmit - FCC32**
Manufacturer		SpaceX		SpaceX
Model		1.47 meter		1.47 meter
Gain / Diameter		46.9 dBi / 1.5 m		49.5 dBi / 1.5 m
3-dB / 15-dB Beamwidth		0.77° / 1.70°		0.49° / 1.17°
Max Available RF Power	(dBW/4 kHz)			-39.8
	(dBW/MHz)			-15.8
Maximum EIRP	(dBW/4 kHz)			9.7
	(dBW/MHz)			33.7
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz 20%
	Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz 0.0025%
Frequency Information		**Receive 18.0 GHz**		**Transmit 28.0 GHz**
Emission / Frequency Range (MHz)		62M5D7W - 480MD7W / 17800.0 - 18600.0 62M5D7W - 480MD7W / 18800.0 - 19300.0		62M5D7W - 480MD7W / 27500.0 - 29100.0 62M5D7W - 480MD7W / 29500.0 - 30000.0
Max Great Circle Coordination Distance		262.0 km / 162.8 mi		125.0 km / 77.7 mi
Precipitation Scatter Contour Radius		100.0 km / 62.1 mi		100.0 km / 62.1 mi

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