

August 9, 2007

Trang Nguyen
Systems Analyst Branch
Satellite Division, International Bureau
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Application for New Fixed Earth Station License (SES-LIC-20070802-01024) (E070168) – Shell Communications, Inc.

Dear Ms. Nguyen,

In reference to your communication of August 8, 2007, please note answers to your questions and requests below:

- a. Demonstrate full compliance with Section 25.132 (b)(1) of our Rules, Verification of Earth Station Antenna Performance Standards. (Express main beam gain, on radiation pattern plots, in units of dBi rather than dBm.)

ANSWER: A new set of antenna patterns is attached showing antenna gain in dBi.

- b. Demonstrate that proposed antenna is 2-degree compliant by showing its off-axis eirp density calculation is less than the parameters specified in Section 25.212 of our Rules. (A successful showing would qualify Applicant for ALSAT operations.)

ANSWER: A demonstration of antenna 2-degree compliance is attached to this correspondence as Exhibit A. The exhibit shows the antenna off-axis eirp density as calculated to be less than the parameters specified in Section 25.212 of the Regulations.¹

¹ The starting angle in the GSO orbital plane for antenna radiation pattern compliance subject to 47 C.F.R. 25.209(a)(1), for C-band, now starts at 1.5° rather than 1.0°. See *2000 Biennial Regulatory Review Streaming and Order Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth and Space Stations*. SIXTH REPORT AND ORDER, IB Docket 00-248, FCC 05-62, Paragraph 25, (Released March 15, 2005.)

- c. Schedule B, Item E15. To the extent that Applicant, at the time of the filing of its application, did not make a showing of compliance with our 2-degree spacing policy, Applicant should now properly change the answer to Item E15 from YES to NO.

ANSWER: As demonstrated in the showing of Exhibit A, the antenna is 2-degree compliant, applicant respectfully requests to leave answer to Item E15 of Schedule B as YES.

Please let me know if the responses I have provided meet your approval and if I can further clarify the issues you have raised.

Sincerely,

/s/ Raul Magallanes

Raúl Magallanes

Attorney

Exhibit A

Spectral Density Calculation

PROJECT PARAMETERS:			
Antenna Manufacturer:	Andrew	Type 243	
Antenna Diameter:	2.40	m	
Transmit:	6.25	GHz	Horizontal
Antenna Gain (Main Beam):	42.00	dBi	
Max EIRP Density at Flange:	-25.28	dBw/4KHz	
FCC EIRP Density Limit:	-2.70	dBw/4KHz	

§25.209(a) CONFORMING ANTENNA					
Angle (Degrees)	§25.209 Gain (dBi)	EIRP Density (dBw/4KHz)	Actual Gain (dBi)	EIRP Density (dBw/4KHz)	EIRP Margin (dBw/4KHz)
1.50	24.60	21.90	24.00	-1.28	-23.17
1.75	22.92	20.22	17.62	-7.66	-27.88
2.00	21.47	18.77	18.50	-6.78	-25.55
2.25	20.20	17.50	17.62	-7.66	-25.15
2.50	19.05	16.35	13.00	-12.28	-28.63
3.00	17.07	14.37	7.00	-18.28	-32.65
3.50	15.40	12.70	6.00	-19.28	-31.97
4.00	13.95	11.25	2.00	-23.28	-34.52
4.50	12.67	9.97	4.80	-20.48	-30.45
5.00	11.53	8.83	3.50	-21.78	-30.60
5.50	10.49	7.79	7.00	-18.28	-26.07
6.00	9.55	6.85	-5.50	-30.78	-37.62

Exhibit A (cont.)

Spectral Density Calculation

PROJECT PARAMETERS:			
Antenna Manufacturer:	Andrew	Type 243	
Antenna Model:	2.40	m	
Transmit:	6.25	GHz	Vertical
Antenna Gain (Main Beam):	42.00	dBi	
Max EIRP Density at Flange:	-25.28	dBw/4KHz	
FCC EIRP Density Limit:	-2.70	dBw/4KHz	

§25.209(a) CONFORMING ANTENNA					
Angle (Degrees)	§25.209 Gain (dBi)	EIRP Density (dBw/4KHz)	Actual Gain (dBi)	EIRP Density (dBw/4KHz)	EIRP Margin (dBw/4KHz)
1.50	24.60	21.90	21.00	-4.28	-26.17
1.75	22.92	20.22	15.75	-9.53	-29.75
2.00	21.47	18.77	18.00	-7.28	-26.05
2.25	20.20	17.50	16.37	-8.91	-26.40
2.50	19.05	16.35	10.00	-15.28	-31.63
3.00	17.07	14.37	10.50	-14.78	-29.15
3.50	15.40	12.70	8.00	-17.28	-29.97
4.00	13.95	11.25	-6.00	-31.28	-42.52
4.50	12.67	9.97	5.50	-19.78	-29.75
5.00	11.53	8.83	-2.80	-28.08	-36.90
5.50	10.49	7.79	4.80	-20.48	-28.27
6.00	9.55	6.85	1.00	-24.28	-31.12