Approved by OMB 3060-0678
Estimated Burden: up to 80 hours
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Federal Communications Commission

312 File Number: **SESMFS2022021400175**

Filing Description

Question	Response
Description	This Schedule S is submitted in support of application SES-MFS-20220214-00175 adding the SES-12 satellite at 95 E.L as a point of communication

Satellite Information

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	SES-12
Estimated Lifetime of Satellite(s) From Date of Launch	20 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating Frequency Bands (5)

Nature of service	Description	Frequency Band(s)	Mode Type
Fixed-Satellite Service		10950.0 MHz -11200.0 MHz	Transmit
Fixed-Satellite Service		12500.0 MHz -12750.0 MHz	Transmit
Fixed-Satellite Service		11450.0 MHz -11700.0 MHz	Transmit
Fixed-Satellite Service		14000.0 MHz -14500.0 MHz	Receive
Fixed-Satellite Service		13750.0 MHz -14000.0 MHz	Receive

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	95.0 degrees
	Hemisphere of Orbital Longitude	E
Longitudinal Tolerance or East /West Station-Keeping	Toward West	0.05 degrees
	Toward East	0.05 degrees
Inclination Excursion or North /South Station-Keeping Tolerance	Inclination Excursion or North /South Station-Keeping Tolerance	0.1 degrees
Antenna Axis Attitude Accuracy	Roll	0.07 degrees
	Pitch	0.07 degrees
	Yaw	0.08 degrees

Receiving Beams 1:

Question	Response
Beam ID	NEHl
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	6.3 dB/K
Min. Saturation Flux Density	-105.3 dBW/m2
Max. Saturation Flux Density	-80.3 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	North-East Asia, Guam, parts of China, Philippines, Japan, Korea

Receiving Beams 2:

Question	Response
Beam ID	NEHh
Receive Beam Frequency	14250.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	6.3 dB/K
Min. Saturation Flux Density	-105.3 dBW/m2
Max. Saturation Flux Density	-80.3 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	North-East Asia, Guam, parts of China, Philippines, Japan, Korea

Receiving Beams 3:

Question	Response
Beam ID	SEHh
Receive Beam Frequency	14250.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	7.8 dB/K
Min. Saturation Flux Density	-106.8 dBW/m2
Max. Saturation Flux Density	-81.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Receiving Beams 4:

Question	Response
Beam ID	SEHl
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	7.8 dB/K
Min. Saturation Flux Density	-106.8 dBW/m2
Max. Saturation Flux Density	-81.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Receiving Beams 5:

Question	Response
Beam ID	SEVh
Receive Beam Frequency	14250.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	7.8 dB/K
Min. Saturation Flux Density	-106.8 dBW/m2
Max. Saturation Flux Density	-81.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Receiving Beams 6:

Question	Response
Beam ID	SEVl
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	7.8 dB/K
Min. Saturation Flux Density	-106.8 dBW/m2
Max. Saturation Flux Density	-81.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Receiving Beams 7:

Question	Response

Beam ID	NE17
Receive Beam Frequency	14000.0 MHz -14125.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	15.6 dB/K
Min. Saturation Flux Density	-114.6 dBW/m2
Max. Saturation Flux Density	-89.6 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Guam, Northern Mariana Islands

Receiving Channels (11)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
B11	26.0	14015.312	Service Link
B12	26.0	14044.812	Service Link
D23	54.0	14399.0	Service Link
D24	54.0	14460.0	Service Link
J21	54.0	13778.0	Service Link
J22	54.0	13839.0	Service Link
J24	54.0	13961.0	Service Link
J23	54.0	13900.0	Service Link
D22	54.0	14338.0	Service Link
D21	54.0	14277.0	Service Link
B22	54.0	14090.187	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	NEVh
Transmit Beam Frequency	12500.0 MHz -12750.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-21.7 dBW/Hz
Max. Transmit EIRP	52.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	North-East Asia, Guam, parts of China, Philippines, Japan, Korea

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-150.0	-148.8	-148.7	-148.6	-148.5	-147.7

Transmitting Beams 2:

Question	Response
Beam ID	NEVl
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz

Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-21.7 dBW/Hz
Max. Transmit EIRP	52.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	North-East Asia, Guam, parts of China, Philippines, Japan, Korea

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-150.0	-148.8	-148.7	-148.6	-148.5	-147.7

Transmitting Beams 3:

Question	Response
Beam ID	SVh
Transmit Beam Frequency	12500.0 MHz -12750.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees

Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-21.0 dBW/Hz
Max. Transmit EIRP	54.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-152.3	-152.1	-151.0	-149.9	-147.8	-147.0

Transmitting Beams 4:

Question	Response
Beam ID	SVl
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-21.0 dBW/Hz

Max. Transmit EIRP	54.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-152.3	-152.1	-151.0	-149.9	-147.8	-147.0

Transmitting Beams 5:

Question	Response
Beam ID	SHh
Transmit Beam Frequency	12500.0 MHz -12750.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-21.0 dBW/Hz
Max. Transmit EIRP	54.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-152.3	-152.1	-151.0	-149.9	-147.8	-147.0

Transmitting Beams 6:

Question	Response
Beam ID	SHI
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-21.0 dBW/Hz
Max. Transmit EIRP	54.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	South East Asia: Malaysia, Indonesia, PNG, Guam

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):

4.0 kHz	-152.3	-152.1	-151.0	-149.9	-147.8	-147.0

Transmitting Beams 7:

Question	Response
Beam ID	N17h
Transmit Beam Frequency	10950.0 MHz -11200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-19.0 dBW/Hz
Max. Transmit EIRP	55.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	Guam, Northern Mariana Islands

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-154.3	-154.1	-154.0	-153.9	-145.8	-145.0

Transmitting Beams 8:

Question	Response

Beam ID	GCH
Transmit Beam Frequency	10950.0 MHz -11200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-22.0 dBW/Hz
Max. Transmit EIRP	43.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global. Visible earth, contour at 8 dB below the peak falls entirely beyond the edge of the visible earth.

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-153.3	-153.1	-153.0	-148.9	-148.8	-148.0

Transmitting Channels (12)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
J24	54.0	12717.0	Service Link
B22	54.0	11040.187	Service Link
B12	26.0	10994.812	Service Link
B11	26.0	10965.312	Service Link
D14A	9.0	11074.25	Service Link
D21	54.0	11481.0	Service Link
D22	54.0	11542.0	Service Link
D23	54.0	11603.0	Service Link
J23	54.0	12656.0	Service Link
J22	54.0	12595.0	Service Link
J21	54.0	12534.0	Service Link
D24	54.0	11664.0	Service Link

Certification Questions

Question	Response
Are the applicable service area coverage requirements of 25.143(b)(2)(ii) and (iii), or 25.144(a)(3)(i), or 25.145(c)(1) and (2), or 25.146(i)(1) and (2), or 25.148(c), or 25.225 met?	N/A
Are the applicable frequency tolerances of 25.202(e) and out-of-band emission limits of 25.202(f)(1),(2), and (3) met?	Yes
Are the cessation of emissions requirements of 25.207 met?	Yes
Are the applicable power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	Yes
For NGSO applications, are the applicable equivalent-power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	N/A
Are the applicable full-frequency-reuse requirements of 25.210 met?	Yes
If the application is for a 17/24 GHz BSS space station, will it be operated at an offset location with full power and interference protection in accordance with 25.262(b)?	

Attachments

File Name	Beam	Field	Attachment Type	Description
NEH_R.gxt	NEHl	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SEH_R.gxt	SEHl	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SEV_R.gxt	SEVl	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
NE17_R.gxt	NE17	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SEV_R.gxt	SEVh	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SEH_R.gxt	SEHh	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
NEH_R.gxt	NEHh	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
N17h_E.gxt	N17h	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SH_E.gxt	SHl	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SH_E.gxt	SHh	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SV_E.gxt	SVl	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
SV_E.gxt	SVh	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
NEV_E.gxt	NEVl	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
NEV_E.gxt	NEVh	GSO Antenna Gain Contour Data	GXT file (*.gxt)	