

SATELLITE EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B (Technical and Operational Description)

E1. Site Identifier:	1
E2. Contact Name:	Paul Schweitzer
E3. Street Address or Area of Operation:	1305 Industrial Park Road
E4. State:	Virginia
E5. Call Sign:	NEW
E6. Phone Number:	Paul Schweitzer Mobile: 301-401-4441 Mt. Jackson Teleport (Business Hours): 540-477-5520 Telesat Call Centre (24/7 Access): 1-800-265-3076
E7. City:	Mount Jackson
E8. County:	Shenandoah
E9. Zip Code:	22842
E11. Latitude:	38°43'47"N
E12. Longitude:	78°39'29"W
E13. Lat/Long Coordinates are:	NAD 83
E14. Site Elevation (AMSL):	283 m

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two-degree spacing policy.	N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	Yes
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report.	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours	No
E20. FAA Notification - (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	No

POINTS OF COMMUNICATION

Satellite Name	
E21. Common Name:	Telesat Leo-1
E22. ITU Name:	COMMSTELLATION
E23. Orbit Location:	Non-GEO
E24. Country:	Canada

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier	1
E26. Common Name	Mount Jackson, VA
E27. Country	USA

ANTENNA

Site ID	E.28. Antenna ID	E29. Quantity	E30. Manufacturer	E31. Model	E32 Antenna Size	E41/42. Antenna Gain: Transmit or Receive
1	1	1	Seatel	4412	1.10 m diameter	Tx Gain: 48.1 dBi at 29.1 GHz Rx Gain: 45.0 dBi at 19.3 GHz
1	2	1	Viasat	GAT-5530	0.77 m x 0.15 m flat panel	Tx Gain: 39.4 dBi at 29.1 GHz Rx Gain: 36.1 dBi at 19.3 GHz
1	3	1	Viasat	G-12	0.30 m diameter	Tx Gain: 35.8 dBi at 29.1 GHz Rx Gain: 32.7 dBi at 19.3 GHz
1	4	1	Viasat	G-18	0.46 m diameter	Tx Gain: 40.2 dBi at 29.1 GHz Rx Gain: 36.8 dBi at 19.3 GHz

E.28. Antenna ID	E33/34. Diameter Minor/Major (m)	E35. Above Ground Level (m)	E36. Above Sea Level (m)	E37. Building Height Above Ground Level (m)	E38. Max Total Input Power at Antenna Flange (W)	E39. Maximum Antenna Height Above Rooftop (m)	E40. Total EIRP for all Carriers (dBW)
1	1.10/ 1.10	1.0	283.0	N/A	12.3	N/A	59.0
2	0.77/0.15 (flat panel)	2.0	283.0	N/A	19.1	N/A	52.2
3	0.30/0.30	2.0	283.0	N/A	21.9	N/A	49.2
4	0.46/0.46	2.0	283.0	N/A	15.9	N/A	52.2

FREQUENCY

E28. Antenna ID	E 43/44. Frequency Band (MHz)	E45. T/R Mode	E46. Antenna Pol (H, V, L, R)	E47. Emission Designator	E48. Max EIRP per Carrier (dBW)	E49. Max EIRP Density per Carrier (dBW/4KHz)	E50. Modulation and Services
1	29000 - 29100	T	L	50MOD1D	59.0	18.0	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
1	29000 - 29100	T	L	10MOD1D	59.0	25.0	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
1	19200 - 19300	R	R	50MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
1	19200 - 19300	R	R	10MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
2	29000 - 29100	T	L	50MOD1D	52.2	11.2	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
2	29000 - 29100	T	L	10MOD1D	52.2	18.2	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
2	19200 - 19300	R	R	50MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
2	19200 - 19300	R	R	10MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
3	29000 - 29100	T	L	50MOD1D	49.2	8.2	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
3	29000 - 29100	T	L	10MOD1D	49.2	15.2	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
3	19200 - 19300	R	R	50MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
3	19200 - 19300	R	R	10MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
4	29000 - 29100	T	L	50MOD1D	52.2	11.2	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
4	29000 - 29100	T	L	10MOD1D	52.2	18.2	Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
4	19200 - 19300	R	R	50MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers
4	19200 - 19300	R	R	10MOD1D			Variable Modulation: QPSK, 8PSK, 16APSK, 32APSK; Test Carriers

FREQUENCY COORDINATION

E28. Antenna ID	E 51. Satellite Orbit Type	E52/53. Frequency Limits (MHz)	E454/55 Range of Satellite Arc Eastern/Western Limit	E56. Earth Station Az. Angle Eastern Limit	E57. Earth Station Elevation Angle Lower Limit	E58. Earth Station Az. Angle Western Limit	E59. Earth Station Elevation Angle Upper Limit	E60. Max EIRP Density toward the Horizon (dBW/4KHz)
1	NGSO	29000 - 29100	NON-GEO	0	20	360	90	-26.6
1	NGSO	19200 - 19300	NON-GEO	0	20	360	90	
2	NGSO	29000 - 29100	NON-GEO	0	20	360	90	-24.7
2	NGSO	19200 - 19300	NON-GEO	0	20	360	90	
3	NGSO	29000 - 29100	NON-GEO	0	20	360	90	-24.1
3	NGSO	19200 - 19300	NON-GEO	0	20	360	90	
4	NGSO	29000 - 29100	NON-GEO	0	20	360	90	-25.1
4	NGSO	19200 - 19300	NON-GEO	0	20	360	90	