



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION

Name: DG Consents Sub, Inc.

Call Sign: E950499

Authorization Type: Modification of License

File Number: SES-MOD-20181105-03445

Non Common Carrier

Grant date: 12/06/2019

Expiration Date: 01/26/2021

Nature of Service: Earth Exploration Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1	3 MILE, CHENA HOT SPRINGS ROAD FAIRBANKS, NORTH STAR, AK 99712	64°53'26.0"N	147°31'44.0"W	215	83

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning January 26, 2006 (3 AM Eastern Standard Time) and ending January 26, 2021 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is December 6, 2020 (3 AM Eastern Standard Time) . Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	8393.9705-8394.0295	R	59K7G1D	Rx			1		QPSK, TELEMETRY
2)	8385.9400-8386.0600	R	120KG1D	Rx			1		QPSK, TELEMETRY
3)	8380.0000-8380.0000	L	5M80G7D	Rx			1		DIGITAL/TELEMETRY
4)	8345.9680-8346.0320	R	64K0G1D	Rx			1		IMAGE DATA
5)	8135.0000-8285.0000	L,R	150MG1D	Rx			1		QPSK, DATA
6)	8030.0000-8030.0000	R	4M00G7D	Rx	0.00	0.00	1		Telemetry
7)	8025.0000-8400.0000	L,R	375MG7D	Rx			1		DIGITAL/DATA/DOWNLINK
8)	8025.0000-8345.0000	L,R	370MG1D	Rx			1		QPSK, DATA
9)	8025.0000-8345.0000	R	320MG7D	Rx	0.00	0.00	1	1579	DATA



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10)	2094.8960-2096.0000	R	1M32G1D	Tx	51.00	39.00	1		DIGITAL/TT&C
11)	2094.8960-2096.0000	R	250KFXD	Tx	48.00	30.00	1	3450 3850	TT&C
12)	2092.6000-2092.6000	R	1M32G1D	Tx	51.00	39.00	1		BPSK (TT&C)
13)	2092.6000-2092.6000	R	NON	Tx	51.00	51.00	1		UNMODULATED CARRIER
14)	2085.6875-2085.6875	R	1M32G1D	Tx	51.00	39.00	1		DIGITAL/TT&C
15)	2085.6875-2085.6875	R	250KFXD	Tx	48.00	30.00	1	3450 3850	TT&C
16)	2052.0000-2052.0000	R	1M32G1D	Tx	51.00	39.00	1		BPSK (TT&C)
17)	2052.0000-2052.0000	R	68K0G2D	Tx	51.00	51.00	1		BPSK (TT&C)
18)	2052.0000-2052.0000	R	NON	Tx	51.00	51.00	1		UNMODULATED CARRIER
19)	2042.0000-2043.0000	R	68K0G2D	Tx	51.00	51.00	1		BPSK (TT&C)
20)	2042.0000-2043.0000	R	NON	Tx	51.00	51.00	1		UNMODULATED CARRIER
21)	8393.9705-8394.0295	R	59K7G1D	Rx			2		QPSK, TELEMETRY
22)	8385.9400-8386.0600	R	120KG1D	Rx			2		QPSK, TELEMETRY
23)	8380.0000-8380.0000	L	5M80G7D	Rx			2		DIGITAL/TELEMETRY
24)	8345.9680-8346.0320	R	64K0G1D	Rx			2		IMAGE DATA
25)	8135.0000-8285.0000	L, R	150MG1D	Rx			2		QPSK, DATA
26)	8030.0000-8030.0000	R	4M00G7D	Rx			2		Telemetry
27)	8025.0000-8400.0000	L, R	375MG7D	Rx			2		DIGITAL/DATA/DOWNLINK
28)	8025.0000-8395.0000	L, R	370MG1D	Rx			2		QPSK, DATA
29)	8025.0000-8345.0000	R	320MG7D	Rx			2		DATA
30)	2094.8960-2096.8960	R	1M32G1D	Tx	53.60	41.60	2		DIGITAL/TT&C
31)	2094.8960-2095.8960	R	250KFXD	Tx	53.60	35.60	2		TT&C
32)	2092.6000-2092.6000	R	1M32G1D	Tx	53.60	41.60	2		BPSK (TT&C)



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33)	2092.6000-2092.6000	R	NON	Tx	53.60	53.60	2		UNMODULATED CARRIER
34)	2085.6875-2085.6875	R	250KFXD	Tx	53.60	35.60	2		TT&C
35)	2085.6875-2085.6875	R	1M32G1D	Tx	53.60	41.60	2		DIGITAL/TT&C
36)	2052.0000-2052.0000	R	1M32G1D	Tx	53.60	41.60	2		BPSK (TT&C)
37)	2052.0000-2052.0000	R	68K0G2D	Tx	53.60	53.60	2		BPSK (TT&C)
38)	2052.0000-2052.0000	R	NON	Tx	53.60	53.60	2		UNMODULATED CARRIER
39)	2042.0000-2043.0000	R	68K0G2D	Tx	53.60	53.60	2		BPSK (TT&C)
40)	2042.0000-2043.0000	R	NON	Tx	53.60	53.60	2		UNMODULATED CARRIER

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	2085.6875-2085.6875		NGSO	05.0-05.0		000.0-360.0		21	1
2)	2094.8960-2094.8960		NGSO	05.0-05.0		000.0-360.0		21	1
3)	8025.0000-8400.0000		NGSO	00.0-00.0		000.0-360.0			1
4)	8380.0000-8380.0000		NGSO	00.0-00.0		000.0-360.0			1
5)	8030.0000-8030.0000		NGSO	05.0-05.0		000.0-360.0			1
6)	2085.6875-2085.6875		NGSO	05.0-05.0		000.0-360.0		8.5	1
7)	2094.8960-2094.8960		NGSO	05.0-05.0		000.0-360.0		8.5	1
8)	2092.6000-2092.6000		NGSO	05.0-05.0		000.0-360.0		24.4	1
9)	2052.0000-2052.0000		NGSO	05.0-05.0		000.0-360.0		24.4	1
10)	2042.0000-2042.0000		NGSO	05.0-05.0		000.0-360.0		24.4	1
11)	2094.8960-2094.8960		NGSO	05.0-05.0		000.0-360.0		21	2
12)	2094.8960-2094.8960		NGSO	05.0-05.0		000.0-360.0		8.5	2
13)	2085.6875-2085.6875		NGSO	05.0-05.0		000.0-360.0		21	2
14)	2085.6875-2085.6875		NGSO	05.0-05.0		000.0-360.0		8.5	2
15)	2092.6000-2092.6000		NGSO	05.0-05.0		000.0-360.0		24.4	2



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#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
16)	2052.0000-2052.0000	NGSO		05.0-05.0		000.0-360.0		24.4	2
17)	2042.0000-2042.0000	NGSO		05.0-05.0		000.0-360.0		24.4	2
18)	8380.0000-8380.0000	NGSO		05.0-05.0		000.0-360.0		0	2
19)	8030.0000-8030.0000	NGSO		05.0-05.0		000.0-360.0		0	2
20)	8025.0000-8400.0000	NGSO		05.0-05.0		000.0-360.0		0	2

D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to Worldview-1 (S2129) NGSO satellite (U.S.-licensed) (506 x 521 km @ 97.36° Incln)
- 2) 1 to Worldview-2 (S2129) NGSO satellite (U.S.-licensed) (795 - 780 km @ 98.5° Incln)
- 3) 1 to GeoEye 1 (S2348) NGSO satellite (U.S.-licensed)
- 4) 1 to Worldview-3 (S2129) NGSO satellite (U.S.-licensed) (626 x 642 km @ 97.988° Incln)
- 5) 1 to Worldview-4 (S2348) NGSO satellite (U.S.-licensed)[425 x 525 km @ 97° Incln)
- 6) 1 to Worldview- Legion Blocks 1 & 2 (S2129) NGSO satellite (U.S.-licensed) (450-870 km @ 98.48° & 45° Incln)

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	1	1	7.3	DATRON/TRANSCO	8300	215	6 AGL/ 221 AMSL	
Max Gains(s): 51.5 dBi @ 8.0000 GHz 40.3 dBi @ 2.0250 GHz 36.6 dBi @ 2.0850 GHz 36.6 dBi @ 2.0420 GHz 36.6 dBi @ 2.0520 GHz 36.6 dBi @ 2.0857 GHz 36.6 dBi @ 2.0949 GHz 36.6 dBi @ 2.0926 GHz 3								
Maximum total input power at antenna flange (Watts) =					11.00			
Maximum aggregate output EIRP for all carriers (dBW) =					51.00			
1	2	1	5.4	VIASAT	V8X-Y	215	6.4 AGL/ 221.6 AMSL	
Max Gains(s): 40.3 dBi @ 2.0250 GHz 28.5 dBi @ 8.0300 GHz 36.6 dBi @ 2.0250 GHz 36.6 dBi @ 2.0949 GHz 36.6 dBi @ 2.0857 GHz 36.6 dBi @ 2.0926 GHz 36.6 dBi @ 2.0520 GHz 36.6 dBi @ 2.0420 GHz 3								
Maximum total input power at antenna flange (Watts) =					50.00			
Maximum aggregate output EIRP for all carriers (dBW) =					53.60			



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F) Remote Control Point:

1	1601 DRY CREEK DRIVE, SUITE 260	Call Sign: E950499
	LONGMONT, BOULDER, CO 80503	
	303-684-4587	

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

4 --- Licensee must ensure that a current listing of the name, title, mailing address, email address, and telephone number of the responsible point of contact are on file at the FCC. Any changes must be filed electronically in the International Bureau Filing System (MyIBFS) using the "Pleadings and Comments" link on the MyIBFS homepage within 10 days of the change.

6 --- Licensee must comply with the license modification and notification requirements of 47 CFR § 25.118 to change the coordinates of its authorized earth station.

9 --- Site location coordinates are based on the WGS84 datum.

481 --- In the 8025-8400 MHz band, all receive-only operations having elevation angles below 5 degrees are on an unprotected basis.

1579 --- The facilities authorized herein shall be used in accordance with the Rules and Regulations promulgated in the FCC Rules and Regulations, in particular Part 1, Part 17, and Part 25. The facilities authorized herein shall be operated in accordance with US DEPT. OF COMMERCE, (NTIA), (a) Memorandum (attachment), dated 19/18/95, William Gamble, NTIA to William Torak, FCC; and (b) Letter (attachment), dated 9/12/95, Nelson Pollack, (USAF IRAC); Bruce Swearingen (Navy IRAC); Frank Holderness (Army IRAC); Edwin E. Dinkle (IRAC), US Dept. of Commerce. The facilities authorized herein shall be operated in accordance with FCC Order & Authorization, EARTHWATCH INCORPORATED DA-1707, File No. 21.22-DSS-P-93, 43-DSS-LA-94 (2), & 52-SAT-AMEND-95, Adopted 8/1/95, released 8/1/95, copy attached hereto Radio Station Authorization, E950499, 1658-DSE-P/L-95

3450 --- The use of the authorized frequency band has been approved by the Society of Broadcast Engineers (SBE) in the relevant state.

3850 --- As a secondary user of the frequency band, licensee shall not cause harmful interference to primary services in the frequency band and it can not claim protection from harmful interference from primary services in the frequency band.

90398 --- Changes to previously authorized transmitting facilities, operations and devices regulated by the Commission that may have significant environmental impact, and are not excluded by §1.1306, require the preparation of an Environmental Assessment (EA) by the licensee. (See 47 C.F.R. §§1.1307, 1.1308 and 1.1311)



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

90399 --- The licensee shall, at all times, take all necessary measures to ensure that operation of this (these) authorized earth station(s) does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR §§ 1.1307(b) and 1.1310. Physical measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling, or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.



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B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station does not meet each required construction deadline by the required date of completion unless, before such date(s), a specific application is timely filed to request an extension of the construction deadline(s), supported with good cause why that failure to construct by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.