



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION**

RADIO STATION AUTHORIZATION

Name: Northrop Grumman Corporation

Call Sign: E030025

Authorization Type: License

File Number: SES-LIC-20030122-00062

Non Common Carrier

Grant date: 05/19/2003

Expiration Date: 05/19/2018

Nature of Service: Domestic Fixed Satellite Service

Class of Station: Temporary Fixed Earth Station

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	Langley	Langley AFB, USA, VA	37°4'0.0"N	76°22'0.0"W	6	83

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 May 19, 2003 (3 AM Eastern Standard Time) and ending May 19, 2018 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is May 19, 2004 (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)	14000.0000-14500.0000	H,V	433KG1D	Tx	80.70	57.37	1		QPSK with Reed-Solomon (208,192) concatenated with rate 1/2 constraint length 7 convolutional encoding
2)	11700.0000-12200.0000	H,V	12M4G1D	Rx			1		
3)	11700.0000-12200.0000	H,V	3M35G1D	Rx			1		
4)	11700.0000-12200.0000	H,V	43M3G1D	Rx			1		
5)	11700.0000-12200.0000	H,V	57M8G1D	Rx			1		
6)	11700.0000-12200.0000	H,V	65M0G1D	Rx			1		
7)	11700.0000-12200.0000	H,V	69M1G1D	Rx			1		



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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)	14000.0000-14500.0000	4.0W	149.0W	05.0	05.0	100.6	259.2	15.36	1
2)	11700.0000-12200.0000	4.0W	149.0W	05.0	05.0	100.6	259.2		1

D) Points of Communications

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

- 1) Langley to INTELSAT AOR @ 307.0 E.L. satellite of the INTELSAT system (U.S.-licensed)
- 2) Langley to Permitted Space Station List

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)
Langley	1	1	6.25	L-3 Communications	7186095	6	6.7 AGL/ 12.7 AMSL	
		Max Gains(s): 57.4 dBi @ 14.0000 GHz						
		Maximum total input power at antenna flange (Watts) =		300.00				
		Maximum aggregate output EIRP for all carriers (dBW) =		80.70				

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions



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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:

- 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.
- 2810 --- The grantee shall maintain on file with the Commission's current list or plan of the precise frequencies in actual use at this station, specifying for each such frequency: the r.f. center frequency, polarization, emission designator, EIRP (dBW), EIRP density (dBW/4kHz), and receiving earth station(s). This list or plan may be submitted either on a station-by-station basis or on a system-wide basis, and shall be updated within seven days of any changes in frequency usage at this station. Temporary usage of frequencies for periods of less than seven days need not be notified to the Commission if accurate station records are maintained of the times and particulars of such temporary frequency usage.
- 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
- 2938 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: (1) name of the licensee, (2) file number of the application, (3) call sign of the antenna, (4) date of the license, (5) certification that the facility as authorized has been completed, (6) certification that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209, and (7) certification that the station is operational (including the date of commencement of service) and will remain operational during the license period unless the license is submitted for cancellation.
- 3458 --- This license authorization is limited to the use of frequency band 14.0-14.5 GHz (uplink) and frequency band 11.7-12.2 GHz (downlink), commonly referred to, jointly, as the Ku-band. The licensee of the facilities herein authorized shall establish/maintain a Network Control Center having the capability of instantaneously terminating all transmissions from all stations in this authorized network upon notification. The licensee shall not cause harmful radio interference into any conforming service in the 14.0-14.5 GHz/11.7-12.2 GHz band (See 47 CFR section 2.106), and as a non-conforming user of such frequency band, must accept any radio interference from any service with superior status authorized to use such band. The licensee and its satellite provider(s) must coordinate this authorized network with adjacent satellite operators, both domestic and international, to eliminate the possibility of adjacent satellite radio interference and must cease transmissions immediately upon notification of radio interference caused by the nonconforming use of the aforementioned frequency band. The licensee must file a modification of this authorized network to obtain prior Commission approval -- (a) to change satellite provider and (b) to change parameters related to the various earth stations in this authorized network. The licensee shall maintain a log recording all incidents of alleged harmful radio interference. The log shall document the nature of each incident, the parties involved and the outcome. The log shall be maintained for a five year period after each incident.
- 5216 --- All operations shall be on a non-common carrier basis.



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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 is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction 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.