Approved by OMB
3060−0678

Date & Time Filed: Jan 12 2004 3:05:19:363PM
File Number: SES−LIC−INTR2004−00041
Callsign/Satellite ID:

| APPLICATION FOR EARTH STATION AUTHORIZATIONS<br><br>FCC 312 MAIN FORM FOR OFFICIAL USE ONLY | FCC Use Only |
|---|---|

APPLICANT INFORMATION
Enter a description of this application to identify it on the main menu:
Joint−STARS 1.8 meter earth station No. 4

1−8. Legal Name of Applicant

| | | | |
|---|---|---|---|
| **Name:** | Northrop Grumman Systems Corporation | **Phone Number:** | 202−508−9519 |
| **DBA Name:** | | **Fax Number:** | 202−371−8519 |
| **Street:** | 1299 Pennsylvania Avenue, N.W., 10th Floor | **E−Mail:** | davidsiddall@paulhastings.com |
| **City:** | Washington | **State:** | DC |
| **Country:** | USA | **Zipcode:** | 20004 − |
| **Attention:** | David R Siddall | | |

| | |
|---|---|
| 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. | ◉ Yes ○ No ○ 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 ○ No ◉ N/A |
| E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point. | ○ Yes ◉ No |

| | |
|---|---|
| E18. Is frequency coordination required? If YES, attach a frequency coordination report as | ○ Yes ◉ No |
| E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as | ○ Yes ◉ 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?<br>FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION. | ◉ Yes ○ No |

POINTS OF COMMUNICATION

| |
|---|
| Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following: |

| | |
|---|---|
| E21. Common Name: | E22. ITU Name: |
| E23. Orbit Location: | E24. Country: |

POINTS OF COMMUNICATION (Destination Points)

| | |
|---|---|
| E25. Site Identifier: | |
| E26. Common Name: | E27. Country: |

ANTENNA

| Site ID | E28. Antenna Id | E29. Quantity | E30. Manufacturer | E31. Model | E32. Antenna Size<meters> | E41/42. Antenna GainTransmint and/or Recieve (____dBi at _____GHz) |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | Vertex RSI | 18QD | 1.8 | 45.0 dBi at 12.000 |
| | | | | | | 46.5 dBi at 14.000 |

| E28. Antenna Id | E33/34. Diameter Minor/Major (meters) | E35. Above Ground Level<BR> (meters) | E36. Above Sea Level<BR> (meters) | E37. Building Height Above Ground Level<BR> (meters) | E38. Total Input Power at antenna flange<BR> (Watts) | E39. Maximum Antenna Height Above Rooftop<BR> (meters) | E40. Total EIRP for al carriers<BR> (dBW) |
|---|---|---|---|---|---|---|---|
| 1 | 0.0/0.0 | 3.0 | 0.0 | 0.0 | 2.0 | 0.0 | 49.51 |

FREQUENCY

| E28. Antenna Id | E43/44. Frequency Bands (MHz) | E45. T/R Mode | E46. Antenna Polarization(H,V, L,R) | E47. Emission Designator | E48. Maximum EIRP per Carrier (dBW) | E49. Maximum ERIP Density per Carrier (dBW/4kHz) |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 11700<br>12200 | R | Horizontal and Vertical | 6M55G7W | 0.0 | 0.0 |

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

8.192 MBPS, QPSK, FEC

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 14000<br>14500 | T | Horizontal and Vertical | 6M55G7W | 49.5 | 26.0 |

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

8.192 MBPS, QPSK, FEC

FREQUENCY COORDINATION

| **E28. Antenna Id** | **E51. Satellite Orbit Type** | **E52/53. Frequency Limits(MHz)** | **E54/55. Range of Satellite Arc E/W Limit** | **E56. Earth Station Azimuth Angle Eastern Limit** | **E57. Antenna Elevation Angle Eastern Limit** | **E58. Earth Station Azimuth Angle Western Limit** | **E59. Antenna Elevation Angle Western Limit** | **E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)** |
|---|---|---|---|---|---|---|---|---|
| 1 | Geostationary | 14000<br>14500 | 90.0/ 270.0 | 90.0 | 5.0 | 270.0 | 5.0 | −29.5 |

REMOTE CONTROL POINT LOCATION

| E61. Call Sign<br><br>NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed. | | E65. Phone Number | |
|---|---|---|---|
| E62. Street Address | | | |
| E63. City | E67. County | E64/68. State/Country / | E66. Zip Code |

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