

## **Exhibit 1 - Showing of Compliance with Sections 25.221 and 25.222**

Astrium Services Government, Inc.

Application for Modification of License to Add up to  
500 Sea Tel Model 9707/9797/9711 2.4 Meter C-band Antennas;  
500 Intellian Model v240 2.4 Meter C-band Antennas;  
500 Sea Tel Model 9711QOR  
Combination 2.4 Meter C-band/1.2 Meter Ku-band Antennas;  
500 Intellian Model v100 1.06 Meter Ku-band Antennas;  
500 Intellian Model v130 1.25 Meter Ku-band Antennas;  
500 Mitsubishi Model MVA60 0.60 Meter Ku-band Antennas; and  
500 Mitsubishi Model MVA120 1.2 Meter Ku-band Antennas  
To Call Sign KA313 License ESV Authorization

SES-MOD-20111109-01345

Call Sign KA313

By this application applicant Astrium Services Government, Inc. (Astrium) seeks authority to add up to 500 Sea Tel Model 9707/9797/9711 2.4 Meter C-band Antennas; 500 Intellian Model v240 2.4 Meter C-band Antennas; 500 Sea Tel Model 9711QOR Combination 2.4 Meter C-band/ 1.2 Meter Ku-band Antennas; 500 Intellian Model v100 1.06 Meter Ku-band Antennas; 500 Intellian Model v130 1.25 Meter Ku-band Antennas; 500 Mitsubishi Model MVA60 0.60 Meter Ku-band Antennas; and 500 Mitsubishi Model MVA120 1.2 Meter Ku-band Antennas to its call sign KA313 license authorization for Earth Station on Vessel (ESV) service. The application requests authority for the remote C-band antennas to communicate via the SES-4 and NSS-9 satellites and for the remote Ku-band antennas to communicate with any satellite on the Permitted Space Station List (ALSAT) to provide ESV service. These remote ESVs will be located on vessels traveling in U.S. and international waters. They will operate with hub antennas that are separately licensed by the Commission and will be utilized to provide ESV service as previously authorized by the Commission. As with the other antennas previously authorized for ESV service, operation of these antennas will be in full compliance with the requirements of the Commission's ESV regulations as set forth in part 25 of the Rules.

ASTRIUM's showing of compliance with Part 25 of the Commission's Rules follows herewith and the exhibits required by Sections 25.221 and 25.222 are included as attachments to the application.

Showing of Compliance with Part 25 of the Commission's Rules

Section 25.221

(a) (1) Comply.

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See the Sea Tel and ASTRIUM Sea Tel declarations and Exhibits 2, 3 and 4 for the Sea Tel model 9707, 9797 and 9711 C-band antennas and the C-band side of the Sea Tel model 9711 QOR antennas.

See the Intellian and ASTRIUM Intellian declarations and Exhibits 5, 6 and 7 for the Intellian model v240 C-band antennas.

All of the ESV antennas listed above use transmitters that have off-axis EIRP spectral densities less than or equal to the levels in paragraph 25.221(a)(1)(i) and meet the requirements of 25.221 (a)(1)(i)(A-C) with an N value of 1. The referenced exhibits provide the detailed demonstration described in paragraph 25.221 (b)(1). The Sea Tel declaration also contains the certification that the antennas comply with the pointing requirement in paragraph 25.221 (a)(1)(ii)(A) and the cessation of emission requirement in paragraph 25.221 (a)(1)(iii)(A).

(a) (2) Not Applicable

(a) (3) Comply. The ASTRIUM ESV Compliance Officer has authority and ability to cease all emissions from ESVs through the facilities of ASTRIUM teleports or through facilities of non-ASTRIUM teleports used to uplink ASTRIUM operated ESVs pursuant to telehousing arrangements. This point of contact is available 24 hours a day, seven days a week via the ASTRIUM Southbury, CT teleport at 203-262-5010.

(a) (4) Comply. These records are being collected and maintained as specified. Requests to make this data available may be directed to the ASTRIUM ESV Compliance Officer via the Southbury teleport at 203-262-5010.

(a) (5) Comply.

(a) (6) Comply. The ESVs are controlled through Astrium teleports located in the United States or non-ASTRIUM teleports located in the United States used to uplink ASTRIUM operated ESVs pursuant to telehousing arrangements.

(a) (7) Comply.

(a) (8) Comply.

(a) (9) Comply. ASTRIUM is not seeking protection for docked ESVs at this time. In the event that ASTRIUM finds it necessary to do so in the future, it will be accomplished in accordance with the terms of this §25.221 (a) (9).

(a) (10) Agree.

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- (a) (11) Comply. The C-band ESVs which are the subject of this application will not operate within 200 Km of the U.S. coastline or fixed service offshore facilities unless prior coordination has been completed. It is noted that numerous C-band ESV interference studies and frequency coordinations have been completed for ASTRIUM by Comsearch and Skjei Telecom and Notifications Concerning Completion of the Coordinations were filed with the Commission (under the WB36 and KA249 licenses) as specified in the Commission's Public Notice DA 05-1671, Released: June 15, 2005 and the Notifications placed on Public Notice. Other coordinations may be completed as-needed and if so, Notifications for same will be filed with the Commission for Public Notice as they are completed.
- (a) (12) Comply. Vizada has developed and deployed hardware and software which continuously monitors the location of each ESV and its operating frequency; compares this information with data containing mapping coordinates for areas in which ESV operation is (and is not) permitted and coordination information and terms for same; and which will automatically cease the transmissions of the ESV if it is in an area for which coordination is required and operation would be in violation of the terms of coordination.
- (b) (1) Comply. The tables described in 25.221(b)(1)(i) are attached as the following exhibits:
- Exhibits 2, 3 and 4 for the Sea Tel model 9707, 9797 and 9711 C-band antennas and the C-band side of the 9711 QOR antennas;
- Exhibits 5, 6 and 7 for the Intellian model v240 C-band Antennas.
- The value N described in 25.221(a)(1)(i)(A) is 1. Exhibits 2 and 5 provide the detailed demonstration described in paragraph 25.221(b)(1)(i)(A). Exhibits 3 and 6 provide the detailed demonstration described in paragraph 25.221(b)(1)(i)(B). Exhibits 4 and 7 provide the detailed demonstration described in paragraph 25.221(b)(1)(i)(C). The certifications from the equipment manufacturers stating that the tracking systems meet the pointing and cessation of emission requirements of 25.221(b)(1)(iii) are contained in the Sea Tel and Intellian declarations.
- (b) (2) Not Applicable.
- (b) (3) Comply. See SES-4 and NSS-9 maps in the Operations Areas Exhibit.
- (b) (4) Comply. The ASTRIUM ESV Compliance Officer has authority and ability to cease all emissions from ESVs through the facilities of ASTRIUM teleports or through facilities of non-ASTRIUM teleports used to uplink ASTRIUM operated ESVs pursuant to telehousing arrangements. This point of contact is available 24 hours a day, seven days a week via the ASTRIUM Southbury, CT teleport at 203-262-5010.

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(b) (5) Comply. See the Radiation Hazard Report Exhibits.

### Section 25.222

(a) (1) Comply.

See the Sea Tel and ASTRIUM SeaTel declarations and Exhibits 8, 9, and 10 for the Ku-band side of the Sea Tel model 9711 QOR antennas.

See the Intellian and ASTRIUM Intellian declarations and Exhibits 11, 12 and 13 for the Intellian model v100 Ku-band antennas.

See the Intellian and ASTRIUM Intellian declarations and Exhibits 14, 15 and 16 for the Intellian model v130 Ku-band Antennas.

See the Mitsubishi and ASTRIUM Mitsubishi declarations and Exhibits 17, 18, and 19 for the Mitsubishi model MVA60 Ku-band antennas.

See the Mitsubishi and ASTRIUM Mitsubishi declarations and Exhibits 20, 21, and 22 for the Mitsubishi model MVA120 Ku-band antennas.

All of the ESV antennas listed above use transmitters that have off-axis EIRP spectral densities less than or equal to the levels in paragraph 25.222(a)(1)(i) and meet the requirements of 25.222 (a)(1)(i)(A-C) with an N value of 1. The referenced exhibits provide the detailed demonstration described in paragraph 25.222 (b)(1). The Intellian, Mitsubishi and Sea Tel declarations also contain the certifications that the antennas comply with the pointing requirement in paragraph 25.222 (a)(1)(ii)(A) and the cessation of emission requirement in paragraph 25.222 (a)(1)(iii)(A).

(a) (2) Not Applicable

(a) (3) Comply. The ASTRIUM ESV Compliance Officer has authority and ability to cease all emissions from ESVs through the facilities of ASTRIUM teleports or through facilities of non-ASTRIUM teleports used to uplink ASTRIUM operated ESVs pursuant to telehousing arrangements. This point of contact is available 24 hours a day, seven days a week via the ASTRIUM Southbury, CT teleport at 203-262-5010.

(a) (4) Comply. These records are being collected and maintained as specified. Requests to make this data available may be directed to the ASTRIUM ESV Compliance Officer via the Southbury teleport at 203-262-5010.

(a) (5) Comply.

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- (a) (6) Comply. The ESVs are controlled by the Hub earth station located at ASTRIUM's Southbury Teleport.
- (a) (7) Comply.
- (b)(1) Comply. The tables described in 25.221(b)(1)(i) are attached as the following exhibits:
  - Exhibits 8, 9, and 10 for the Ku-band side of the Sea Tel model 9711 QOR antennas.
  - Exhibits 11, 12 and 13 for the Intellian model v100 Ku-band antennas.
  - Exhibits 14, 15 and 16 for the Intellian model v130 Ku-band Antennas.
  - Exhibits 17, 18, and 19 for the Mitsubishi model MVA60 Ku-band antennas.
  - Exhibits 20, 21, and 22 for the Mitsubishi model MVA120 Ku-band antennas.

The value N described in 25.222(a)(1)(i)(A) is 1. Exhibits 8, 11, 14, 17 and 20 provide the detailed demonstration described in paragraph 25.222(b)(1)(i)(A). Exhibits 9, 12, 15, 18 and 21 provide the detailed demonstration described in paragraph 25.222(b)(1)(i)(B). Exhibits 10, 13, 16, 19 and 22 provide the detailed demonstration described in paragraph 25.222(b)(1)(i)(C). The certifications from the equipment manufacturer stating that the tracking systems meet the pointing and cessation of emission requirements of 25.222(b)(1)(iii) are contained in the Intellian, Mitsubishi and Sea Tel declarations.
- (b) (2) Not Applicable.
- (b) (3) Comply. See Operations Areas Exhibit.
- (b) (4) Comply. The ASTRIUM ESV Compliance Officer has authority and ability to cease all emissions from ESVs through the facilities of ASTRIUM teleports or through facilities of non-ASTRIUM teleports used to uplink ASTRIUM operated ESVs pursuant to telehousing arrangements. This point of contact is available 24 hours a day, seven days a week via the ASTRIUM Southbury, CT teleport at 203-262-5010.
- (b) (5) Comply. See the Radiation Hazard Report Exhibits.
- (c) Comply. ASTRIUM has completed coordination with NASA for ESV operations in the 14.0 – 14.2 GHz frequency band within 125 km of NASA TDRSS facilities protected per 24.222 (c). The coordination has been filed with the Commission for completion of the coordination process. Until the coordination process is completed ASTRIUM will continue to comply with

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25.222 (c) by not operating Ku-band ESVs at all in the 14.47 – 14.5 GHz frequency band within the specified distances of the protected facilities.

(d) Comply. ASTRIUM does not operate any ESVs in the 14.47 – 14.5 GHz frequency band.