

### **Description of STA Request**

Inmarsat Hawaii Inc. (“Inmarsat Hawaii”) hereby requests special temporary authority (“STA”) to test its new Lino Lakes, Minnesota gateway earth station facility (the “Lino Lakes gateway”) which is in the final stages of construction.<sup>1</sup> The Lino Lakes gateway will provide essential TT&C and feeder link services for the Inmarsat I5-F2 satellite using a 13.2 meter antenna. The I5-F2 satellite is scheduled for launch in early 2014.

Inmarsat Hawaii currently has an earth station application pending, seeking authority for the Lino Lakes gateway antenna to communicate with the I5-F2 satellite.<sup>2</sup> Inmarsat needs to ensure that the Lino Lakes gateway antenna is operating properly well in advance of the I5-F2 satellite launch and arrival at the 55° W.L. orbital location. This application seeks STA to test the Lino Lakes gateway antenna with another satellite, Anik F2, located at the 111.1° W.L. orbital location.<sup>3</sup>

The antenna tests will consist of uplink transmissions only from the Lino Lakes gateway antenna. The transmissions will consist of continuous wave carriers from the Lino Lakes gateway antenna to the Anik F2 satellite at 111.1° W.L. The signals from the Lino Lakes gateway antenna will be transmitted down from the Anik F2 satellite to Telesat’s Winnipeg teleport facility in Canada using previously authorized frequencies and will be monitored and measured by Inmarsat in order to verify the Lino Lakes gateway earth station antenna performance (e.g., peak gain and side lobe patterns).

The below table provides the carrier parameters to be used for the Lino Lakes gateway antenna performance verification testing (uplink only).

	Uplink
Carrier designation	1K00NON
Allocated bandwidth	1 kHz
Transmit antenna diameter	13.2 m
Transmit antenna gain	69.2 dBi
Maximum uplink EIRP	70 dBW
Maximum satellite (downlink) EIRP	38.0 dBW

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<sup>1</sup> The Lino Lakes gateway consists of one 13.2 meter antenna. The antenna coordinates, listed on the STA application form, are latitude 45° 7' 56.0" N and longitude 93° 5' 44.0" W.

<sup>2</sup> See, File Nos. SES-LIC-20120426-00397; SES-AMD-20120823-00781; Call Sign E120072 (“Lino Lakes Application”).

<sup>3</sup> The Anik F2 satellite has been authorized to provide service in the United States permitting U.S. earth station operators authority to access the satellite. File No. SAT-PPL-20041004-00194; Call Sign S2646. See, Telesat Canada, Petition for Declaratory Ruling For Inclusion of Anik F2 on the Permitted Space Station List; Petition for Declaratory Ruling to Serve the U.S. Market Using Ka-band Capacity on Anik F2, Order, DA 02-3490, 17 FCC Rcd. 25,287 (Int'l Bur. 2002) as modified by Public Notice Report No. SAT-00268; DA No. 05-241 (Jan. 28, 2005).

FREQ 0	Out Bound Carriers
U/L Frequency	29712 - 29748 MHz
D/L Frequency	18512-1848 MHz (not requested)
Polarisation	RHCP Uplink RHCP Downlink (not requested)

The Anik F2 at 111.1° W.L. orbital location is within the arc covered by the Comsearch Frequency Analysis Coordination Report submitted with Lino Lakes Application.<sup>4</sup> Moreover, the proposed maximum EIRP density for testing operations is within the maximum EIRP density included in that Comsearch report.<sup>5</sup> Inmarsat Hawaii Inc. incorporates by reference the technical information contained in those prior filings.

Grant of the requested STA will serve the public interest, convenience and necessity because it will help ensure that this new earth station facility performs according to its design specifications and can reliably be used to control and communicate with the I5-F2 satellite. Inmarsat respectfully requests that the Commission grant STA beginning June 18, 2013 for period of 30 days.

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<sup>4</sup> See, Lino Lakes Application, File No. SES-LIC-20120426-00397, Exhibit E.

<sup>5</sup> See *Id.*