

### **Description of STA Request**

Inmarsat Hawaii Inc. (“Inmarsat”) hereby requests special temporary authority (“STA”) to use its Paumalu, Hawaii FSS gateway earth station facility, Call Sign E080059 (the “Paumalu Gateway”),<sup>1</sup> to receive certain Global Positioning System (“GPS”)-related data as a part of the Federal Aviation Administration’s (“FAA”) Wide Area Augmentation System (“WAAS”). More specifically, Inmarsat seeks STA to receive WAAS communications from the Inmarsat 4F3 (“I4F3”) spacecraft over “L1” and “L5” GPS frequencies (1573.42-1577.42 MHz and 1166.45-1186.45 MHz, respectively).

WAAS provides augmentation messages containing corrections for timing and errors in the GPS message from GPS satellites, allowing GPS system users to compute better positional accuracy than they could with standard GPS data alone. The requested STA would allow Inmarsat to configure and test its planned components of the WAAS augmentation system, in collaboration with the FAA, in anticipation of full implementation at a later date. Notably, Inmarsat has filed an application to modify the license for the Paumalu Gateway on a permanent basis to enable it to receive WAAS data over the L1 and L5 frequencies (the “Modification Application”).<sup>2</sup>

Inmarsat’s operations would be consistent with the technical parameters specified in that application, and, as demonstrated therein, would not pose any risk of harmful interference. Consistent with the Modification Application, Inmarsat’s receive operations pursuant to STA would be limited to configuration and testing activities. While WAAS data transmitted from the I4F3 spacecraft ultimately would be used by end users following grant of the Modification Application and after Inmarsat’s components of the WAAS system are fully implemented and tested, such implementation and testing would not be complete until at least January 2011. During this testing and implementation phase, WAAS data transmitted from the I4F3 spacecraft would be encoded with a “do not use” code directing GPS user terminals to ignore transmissions from the I4F3 spacecraft over the L1 and L5 frequencies.<sup>3</sup> Inmarsat would request that the FAA not alter this encoding until users have obtained requisite authority from the Commission.<sup>4</sup>

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<sup>1</sup> The Paumalu Gateway currently consists of two 16 meter antennas: a South Antenna at Latitude 21 40 10.4 N, Longitude 158 01 59.4 W; and a North Antenna at Latitude 21 40 11.3 N, Longitude 158 01 59.6 W. The Modification Applications seeks authority to add a third antenna at Latitude 21 40 10.1 N; Longitude 158 1 59.2 W (the location listed on the cover form to this request). Inmarsat also owns a 19 meter antenna at the same site, Call Sign KA25.

<sup>2</sup> See IBFS File No. SES-MOD-INTR2010-00493 (filed Feb. 4, 2010).

<sup>3</sup> WAAS data are generated by the FAA at its WAAS Master Station. Neither the I4F3 spacecraft nor the Paumalu Gateway would alter these data.

<sup>4</sup> Inmarsat is planning to request that the Commission allow GPS users to receive signals from the I4F3 spacecraft without filing individual receive-only applications, likely through either a waiver request or petition for declaratory ruling.

In order to meet the needs of the FAA, testing of Inmarsat's WAAS equipment currently is scheduled to begin in mid-February. Grant of the requested STA would serve the public interest, convenience and necessity by allowing Inmarsat to configure and test its components of the WAAS system during the scheduled testing period, and until the Modification Application is granted. Doing so thus would facilitate important United States government interests in improving the performance and accuracy of the existing GPS network. Therefore, Inmarsat respectfully requests that the Commission grant the requested STA for an initial period of 60 days, beginning February 11, 2010.