U.S. Department
of Transportation
**Federal Aviation
Administration**

DEC 21 2010

Mr. Karl B. Nebbia
Associate Administrator
National Telecommunications and
Information Administration
1401 Constitution Ave., NW
Washington, DC 20230

Dear Mr. Nebbia:

On behalf of the Federal Aviation Administration (FAA), I would like to provide you with our comments on the application of LightSquared requesting the modification of its Federal Communications Commission (FCC) authority for ancillary terrestrial component (FCC File number SAT-MOD-20101118-00239). The Department of Transportation (DOT) has the following concerns: (1) adequate protection of Global Positioning System (GPS) from mobile-satellite service (MSS) ancillary terrestrial component base stations and MSS ancillary terrestrial component handsets; (2) applicability of priority and preemption requirements on MSS ancillary terrestrial component handsets for satellite air traffic control (ATC) communications; and (3) the potential for MSS ancillary terrestrial component interference to ATC satellite communications (SATCOM) during pre-flight checkout.

LightSquared's proposed modification of their license creates a new electromagnetic environment that was not previously anticipated. The proposed modification would authorize handsets to operate in a terrestrial-only mode. The authorization of terrestrial-only handsets in MSS spectrum is expected to greatly increase the number and density of handsets in use and associated base stations. This situation poses a greater interference threat to GPS receivers than previously envisioned.

In addition, the requirement for MSS communications to give priority access by preemption if necessary to SATCOM safety communications is clearly established. When LightSquared (then Mobile Satellite Ventures) was granted license for integrated ancillary terrestrial component, it was clear that the handsets would be required to meet the priority and preemption requirements, since they too would be operating in the MSS. Now that terrestrial-only handsets are a possibility (not integrated into the LightSquared satellite network), there is concern about how such handsets would provide priority and preemption for ATC satellite communications.

Finally, commercial aircraft that fly internationally carry avionics for ATC satellite communications. Pilots routinely perform pre-flight checks that include testing for the reception of ATC satellite communications. There is already concern by the aviation community that the previously-envisioned ancillary terrestrial component would inhibit

successful pre-flight check of ATC satellite communications. Proliferation of mobile stations expected with a terrestrial-only model would only serve to exacerbate this problem.

In conclusion, the FAA recommends that the National Telecommunications and Information Administration suggest that the FCC explore this proposed LightSquared modification via rulemaking and not simply a waiver, and that the rulemaking must address a number of issues including: 1) spurious emission limits for the band 1559-1610 MHz (that is allocated exclusively to the radionavigation-satellite service and used by many GPS applications) derived under the new terrestrial-only assumptions; 2) requirements for priority and preemption for ATC satellite communications over MSS ancillary terrestrial component operations including terrestrial-only terminals; and 3) mitigations for interference that MSS ancillary terrestrial component operations might cause interference during ATC SATCOM pre-flight checkout.

If you have any questions or concerns, please contact me at (202) 267-9720 or Mr. Michael Richmond, FAA Representative at (202) 493-4157 or email michael.richmond@faa.gov.

Sincerely,

Jerrold B. Sandors
Acting Director
Spectrum Engineering Services

cc:
Leo Eldridge
Karen Van Dyke, DOT
James Arnold, DOT