LAW OFFICES
GOLDBERG, GODLES, WIENER & WRIGHT
1229 NINETEENTH STREET, N.W.
WASHINGTON, D.C. 20036

HENRY GOLDBERG
JOSEPH A. GODLES
JONATHAN L. WIENER
DEVENDRA ("DAVE") KUMAR
LAURA A. STEFANI

HENRIETTA WRIGHT
THOMAS G. GHERARDI, P.C.
COUNSEL

THOMAS S. TYCZ*
SENIOR POLICY ADVISOR
*NOT AN ATTORNEY

(202) 429-4900
TELECOPIER:
(202) 429-4912
general@g2w2.com

May 23, 2011

ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: SAT-MOD-20101118-00239

Dear Ms. Dortch:

On May 16, 2011, LightSquared Subsidiary LLC ("LightSquared") submitted the third monthly progress report describing the progress of the Working Group ("WG") convened to study the GPS overload/desensitization issue discussed in the Commission's January 26, 2011 Order in the above-captioned proceeding.[1] The progress report ("May Progress Report") was submitted jointly by LightSquared and the United States Global Positioning System ("GPS") Industry Council ("USGIC") as Co-Chairs of the Working Group.

The attached supplement to the May 16 filing is intended to replace Appendix G in the May Progress Report. The new Appendix G, approved by WG co-chairs LightSquared and USGIC, corrects and clarifies information that was contained in the prior version.

[1] *LightSquared Subsidiary LLC; Request for Modification of its Authority for an Ancillary Terrestrial Component*, SAT-MOD-20101118-00239, DA 11-133, ¶ 43 (rel. Jan. 26, 2011).

Please do not hesitate to contact me with any questions.

Respectfully,

Henry Goldberg
Counsel for LightSquared Subsidiary LLC

cc: Julius Knapp, FCC
Mindel De La Torre, FCC
Ruth Milkman, FCC
Ron Repasi, FCC
Karl Nebbia, NTIA
Tony Russo, NTIA
Eddie Davison, NTIA
IB-SATFO@fcc.gov

Appendix G[1]

LightSquared Live-Sky Test Environment

Field Test Methodology and Transition Details to Reach Single Carrier Planned Power

The test plan described here characterizes the performance of GPS receivers in the presence of L-band base station downlink signals in an outdoor environment with live GPS satellite signals. Production base station transmitter subsystems (including production PAs, filters and other RF components) and antennas are being used to the extent feasible. The base station installation is representative of actual deployment, including a 2° electrical antenna downtilt, except that the dual carrier EIRPs in this field test are lower for some band plans than the initial deployment plan. The antennas comprise 45° cross-polarized elements fed by separate PAs, which will normally (in production base stations) emit signals corresponding to a two-branch transmit MIMO.

In LightSquared's initial deployment plan, the base station will emit L-band signals at 32dBW/carrier (29 dBW/carrier/MIMO branch) in all deployment phases. However this field test began with an EIRP of approximately 29 dBW (59 dBm) per carrier for dual-carrier tests because the base station software is not yet capable of transmitting two channels simultaneously from the same unit(see Table 2, Note 1)[2]. For single-carrier tests, whether using the upper 5-MHz channel or the lower 5-MHz channels alone, the base stations in the field test from May 18 onward has been augmented to emit the originally planned 32 dBW (62 dBm) EIRP. However due to current software limitations, the two carrier emission case will reach only 59 dBm/carrier and not 62 dBm/carrier EIRP as planned for commercial deployment. In other words, the net sector-EIRP for the 2-carrier case will be 62 dBm, not 65 dBm as planned for commercial deployment.

For the planned tests, owing to the limited time available, only the Phase-1 configuration will be tested.[3] The tests comprise all combinations of 5-MHz channels (e.g. standalone upper 5, standalone lower 5 and two 5-MHz channels together. As detailed in Footnote 2 and Table 2, the test sites operated at lower power on May 16 and 17 and are operating at higher power

[1] Modified May 23, 2011 and submitted by the Working Group as a supplement to replace Appendix G of the Third Progress Report on May 16, 2011 submitted to the FCC.

[2] Initially, the output power for single-channel transmissions was approximately 29 dBW (59 dBm) per carrier and 26 dBW (56 dBm) per carrier for a two channel carrier. This was due to higher cable loss than would be typical in a permanent installation which will utilize remote radio heads to a large extent. For the remaining testing, LightSquared is utilizing a higher transmitter output power to compensate for the additional line loss so that the broadcast EIRP is 32 dBW (62 dBm) for the single channel cases and 29 dBW (59 dBm) per carrier for the 2-channel case.

[3] Phase-1 is an appropriate basis for testing as it presents a challenging environment that has the (a) the highest in-band power spectral density and (b) the highest power spectral density nearest to the RNSS band. The two individual 5 MHz channels will be tested separately as this test can show the vulnerability of a given device to 3rd order IM (the reduced power at the device under test will make the IM3 effect less observable); this may be an indicator of the extent of preselector filtering across Band 24.

levels from May 18th onward; however, the two carrier tests will remain 3 dB below the planned EIRP for deployment. Each carrier configuration utilizes different dummy test traffic to simulate real conditions as accurately as possible.

A conservative 100% traffic loading factor has been created using dummy user data generated in the Nokia Siemens' eNode B system tool conventionally used for testing and calibration purposes.

The planned base station power levels and spectrum occupancies are shown in Figure 1; details of the test sites are provided in Table 1 and a high level diagram of the test site locations is shown in Figure 2.

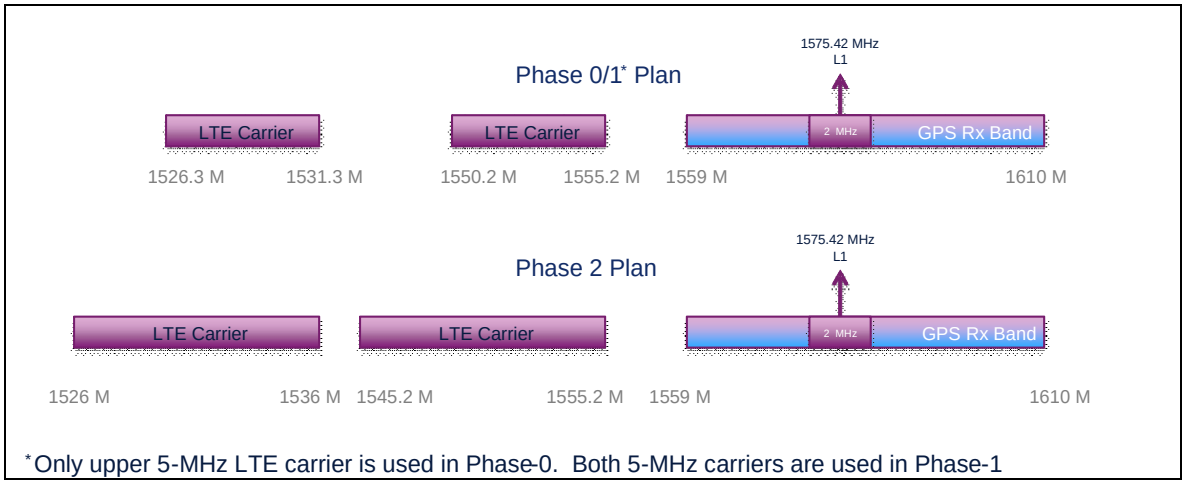

Figure 1: LightSquared Downlink LTE Band 24 and GPS Band (EIRP per carrier: 32 dBW per channel in single-carrier mode and 29 dBW/carrier in two-channel mode)

At all sites, the power at the input to the cable is checked at the time of initial setup. Power monitoring instruments remain connected to the cable input (via a directional coupler) at all times and are checked periodically.

LightSquared Site ID	Latitude	Longitude	Antenna Height AGL (ft)	Number of Sectors	Azimuths (degrees)	City
LVGS0053-C1	35.9697	-114.8681	60	2	30, 270	Rural
LVGS0068-C1	36.1245	-115.2244	55	3	0, 120 ,240	Suburban
LVGS0160-C1	36.127	-115.189	50	3	0, 120, 240	Urban
LVGS0217-C1	36.1065	-115.1705	235	2	0, 240	Dense Urban

Table 1: Test Site Details

Figure 2: Test Site Location Map

Antenna TX Power Budget Site 68 (All Sectors)	5/16-5/17	5/18-5/27	
RRH Power	43	45.5	dBm
LDF4 1/2" Coax Loss	-3.3	-3.3	dB
Antenna Gain dBi	16.8	16.8	dBi
EIRP	56.5	59.0	dBm
Total EIRP per sector with MIMO active	59.5*	62.0*	dBm

Antenna TX Power Budget Site 160 (All Sectors)	5/16-5/17	5/18 - 5/27	
RRH Power	43	45.7	dBm
LDF4 1/2" Coax Loss	-3.5	-3.5	dB
Antenna Gain dBi	16.8	16.8	dBi
EIRP	56.3	59.0	dBm
Total EIRP per sector with MIMO active	59.3*	62.0	dBm

Antenna TX Power Budget Site 53 (All Sectors)	5/16-5/17	5/18 - 5/27	
RRH Power	43	45.7	dBm
LDF4 1/2" Coax Loss	-3.5	-3.5	dB
Antenna Gain dBi	16.8	16.8	dBi
EIRP	56.3	59.0	dBm
Total EIRP per sector with MIMO active	59.3*	62.0	dBm

Antenna TX Power Budget Site 217 (All Sectors)	5/16-5/17	5/18 - 5/27	
RRH Power	43	46.0	dBm
LDF4 1/2" Coax Loss	-3.8**	-3.8**	dB
Antenna Gain dBi	16.8	16.8	dBi
EIRP	56.0	59.0	dBm
Total EIRP per sector with MIMO active	59.0*	62.0	dBm

Table 2: Single Carrier Power Levels by Test Site

* Note 1: The current pre-production eNodeB software does not support two carriers per sector until a future release. For two carrier tests, the eNodeB will require that each carrier be separately input to one of the two antenna ports and will result in the MIMO gain not being present. Thus total sector EIRPs will 62.0 dBM for the two carrier tests.

** Note 2: For Site 217 the LDF Coax Loss has not been verified as of the revision of this document. An estimated value of 3 dB is used; the nominal value for an actual measured value is not expected to be +/- 0.5 dB.

Las Vegas Live Sky LTE Signal Characteristics

The LightSquared eNodeB LTE test signal is per an ETSI standard definition. The eNodeBs in the Las Vegas Live Sky testing will use the E-UTRA Test Model 1.1 (E-TM1.1) as defined for the applicable 5 MHz channels. The specific of the channel characteristics can be found in the ETSI 3GPP Technical Specification 36.141 version 10.1.0. Release 10 under section 6.1.1.1. The physical channel parameters for a 5 MHz channel apply as detailed in Table 6.1.1.1-1 of the test model.