Exhibit 1

Compliance with NTIA GPS Re-Radiation Criteria – Section 8.3.28 of NTIA Regulations Maximum Equivalent Isotropically Radiated Power

The system re-radiates the GPS L1 (1575.42 MHz) and L2 (1227.60 MHz) signals at several locations inside the buildings designated NHQ Building 2, and PTP02. Both systems (dual band) are configured similarly with an active receiving antenna, a signal-boost amplifier (where necessary), a leveling amplifier, RF distribution network and a re-radiating antenna for both frequencies at each site.

The leveling amplifier (GLI-METRO, manufactured by GPS Source) is an amplifier module that is operated in the fixed power control mode, maintaining a fixed output signal level. As a result, the compliance calculation is separated into two steps; calculating the input signal to the leveling amplifier to verify correct input power level, and calculating re-radiating power level of the system using the fixed output of the leveling amp as the starting point.

Calculations are performed based on Section 8.3.28 of the NTIA regulations[1], wherein item 6 states "the maximum equivalent isotropically radiated power must be such that the calculated emissions are no greater than -140dBm/24 MHz at a distance of 100 feet (30 meters) from the building where the test is being conducted." In accordance with the regulation, building attenuation has been ignored. This calculation shows that the re-radiated signal strength is in compliance with NTIA requirements. The calculations are performed for each of the repeater sites in parts A, B, and C below.

The input signal level to the leveling amplifier is a summation of the received power, receive antenna gain, receive antenna amplifier gain, and RF connection losses in the coaxial cables.

$$(1)\ Pin\_lvlamp = Prcv + Grcv\_ant + Grcv\_amp + LS1$$

Where:

Pin_lvlamp = RF signal strength into leveling amplifier
Prcv = Received power from GPS Satellites (-130 dBm)
Grcv_ant = Roof active antenna, (Antcom P/N: 123GM1215A4-XS-1)
= 7.7dBic (L1) and 4.7 dBic (L2)
Grcv_amp = Roof active antenna amplifier gain = 40 dB (L1) and 40 dB (L2)
LSl = summation of coaxial cable loss and in-line amplifier gain (if necessary) from the roof antenna amplifier output to leveling amplifier input port

1 See *Manual of Regulations and Procedures for Federal Radio Frequency Management* Para 8.3.28 (May 2013 Edition, Rev May 2014).

The compliance calculation for the re-radiated signal is a summation of the leveling amplifier output power, RF distribution network losses/gains (power splitter, cables, and additional amplifiers as necessary), and the re-radiating antenna gain.

(2) Psig = Pout_lvlamp + LS2 + Grad_ant + Lprop

Where:

Psig = Re-radiated signal strength located 100 ft from the building exterior wall
Pout_lvlamp = RF signal strength out of the leveling amplifier (fixed)
LS2 = summation of the coaxial cable attenuation, RF splitter loss, and in-line amplifier gain (if necessary) between the leveling amplifier output and the re-radiating antenna input
Grad_ant = Re-radiating antenna, (Antcom P/N: 2.3G1215P-XRS-4)
[2.7dBic (L1) and 1.5 dBic (L2)]
Lprop = Free space propagation (spreading loss) defined in Equation 3 below

*(3) Lprop = 36.6 + 20Log10((D/5280)*freq)*

Where:

D = Distance (in feet)
Freq = frequency (in MHz)

Part A – Nashua Location NL 42-42-14; WL 71-26-46
Determination of signal strength at 100 feet from NHQ Building 2 at the South Nashua, NH facility, coordinates NL 42-42-14; WL 71-26-46.

This configuration has a 350 ft coaxial cable (Times LMR400) connecting the receive antenna amplifier to an in-line compensating amplifier (Tallysman Model TW141). Another 350 ft coaxial cable connects the output of this amplifier to the input of the leveling amplifier. A 10 dB coaxial attenuator is placed before the input of the leveling amplifier to limit the input signal. Calculating LS1 to use in Equation 1:

(4) LS1 = Lcable_1 + Gamp + Lcable_2 + Atten

Where:

Lcable_1 = attenuation of 350 ft of LMR400 coaxial cable (negative number)
Gamp = Gain of in-line amplifier
Lcable_2 = attenuation of 350 ft of LMR400 coaxial cable (negative number)
Atten = attenuation of coaxial attenuator (negative number)

LS1 (dB) = −18.4 dB + 40 dB − 18.4 dB − 10 dB = −6.8 dB [for freq L1]
LS1 (dB) = −16.2 dB + 40 dB − 16.2 dB − 10 dB = −2.4 dB [for freq L2]

Calculation of the leveling amplifier input signal from Equation 1:

Pin_lvlamp = −130 dBm + 7.7 dBic + 40 dB − 6.8 dB = −89.1 dBm [for freq L1]
Pin_lvlamp = −130 dBm + 4.7 dBic + 40 dB − 2.4 dB = −87.7 dBm [for freq L2]

The rated input range for the GLI-METRO leveling amplifier is -115 dBm to -85 dBm.

For this installation the GLI-METRO leveling amplifier is operated in the fixed mode with the output signal strength set at -85 dBm. The signal is distributed to 9 paths with various cable lengths, each connecting to re-radiating antenna (Antcom P/N 2.3G1215P-XRS-4). The re-radiating antenna closest to the building wall is located 10 feet from the building exterior. Therefore, the worst-case propagation loss is calculated for a distance of 110 feet. From Equation 3:

Lprop = 36.6 + 20Log10((110/5280)*1575) = 66.9 dB [for freq L1]
Lprop = 36.6 + 20Log10((110/5280)*1227) = 64.8 dB [for freq L2]

Between the leveling amplifier output and the re-radiating antenna input is an RF network comprised of a short cable, a signal-boosting amplifier (MiniCircuits P/N ZX60-2522M), a 12-way RF power splitter (MiniCircuits P/N ZN12PD-252-S+) with 9 utilized output ports (unused ports are terminated with 50-ohm loads). Each utilized output port has a coaxial attenuator and a cable connecting to the re-radiating antenna. The 9 cable lengths are 10 ft, 44 ft (2x), 32 ft (3x), 24 ft, 30 ft, and 38 ft. The worst-case (least loss) occurs for the 10 ft (shortest) cable. Calculating LS2 to use in Equation 2:

(5) LS2 = Lcable_3 + Gamp + Lsplitter + Latten + Lcable_4

Where:

Lcable_3 = attenuation of 2 ft LMR200 cable = −0.3 dB [L1], −0.2 dB [L2]
Gamp = Gain of in-line amplifier = 23.5 dB [L1], 23.0 dB [L2]
Lsplitter = attenuation from RF splitter = −11.3 dB [L1], −11.2 dB [L2]
Latten = attenuation from coaxial attenuator = −3.0 dB [L1 & L2]
Lcable_4 = attenuation of 10 ft LMR200 cable = −1.3 dB [L1], −1.2 dB [L2]

LS2 = −0.3 dB + 23.5 dB − 11.3 dB − 3 dB − 1.3 dB = 7.6 dB [for freq L1]
LS2 = −0.2 dB + 23.0 dB − 11.2 dB − 3 dB − 1.2 dB = 7.4 dB [for freq L2]

Therefore the signal strength at a point 100 feet away from the building from Equation 2 is calculated:

Psig = −85 dBm + 7.6 dB + 2.7 dBic – 66.9 dB = −141.6 dBm [for freq L1]
Psig = −85 dBm + 7.4 dB + 1.5 dBic – 64.8 dB = −140.8 dBm [for freq L2]

This demonstrates compliance to the -140 dBm requirement.

Converting the re-radiated power based on EIRP (Equivalent Isotropically Radiated Power) at 100 ft from the building to ERP (Effective Radiated Power) in pico-watts from the re-radiating antenna requires the subtraction of 2.148:

For L1

$\text{Prad}_{(\text{ERP})}$ = Psig − 2.148 − Lprop
= −141.6 dBm − 2.148 − (−66.9 dB)
= −76.868 dBm
= 20.57 pW (which is less than the maximum 55.46 pW in the license)

For L2

$\text{Prad}_{(ERP)}$ = Psig − 2.148 − Lprop
= −140.8 dBm − 2.148 − (−64.8 dB)
= −78.218 dBm
= 15.07 pW (which is less than the maximum 31.19 pW in the license)

Part B – Hudson Location NL 42-42-09; WL 71-25-52
Determination of signal strength at 100 feet from Building PTP02 at the Hudson, NH facility, coordinates NL 42-42-09; WL 71-25-52.

This configuration has a 50 ft coaxial cable (RG-58) connecting the receive antenna amplifier to the input of the leveling amplifier. Calculating LS1 to use in Equation 1:

(6) LS1 = Lcable_1

Where:
Lcable_1 = attenuation of 50 ft of RG-58 coaxial cable (negative number)

LS1 (dB) = −12.7 dB [for freq L1]
LS1 (dB) = −10.7 dB [for freq L2]

Calculation of the leveling amplifier input signal from Equation 1:

Pin_lvlamp = −130 dBm + 7.7 dBic + 40 dB − 12.7 dB = −95.0 dBm [for freq L1]
Pin_lvlamp = −130 dBm + 4.7 dBic + 40 dB − 10.7 dB = −96.0 dBm [for freq L2]

The rated input range for the GLI-METRO leveling amplifier is -115 dBm to -85 dBm.

For this installation the GLI-METRO leveling amplifier is operated in the fixed mode with the output signal strength set at -77 dBm. The signal is distributed to 3 paths, each with the same transmitting antenna, but differing cable lengths. The re-radiating antenna closest to the building wall is located next to the building exterior. Therefore, the worst-case propagation loss is calculated for a distance of 100 feet. From Equation 3:

Lprop = 36.6 + 20Log10((100/5280)*1575) = 66.1 dB [for freq L1]
Lprop = 36.6 + 20Log10((100/5280)*1227) = 63.9 dB [for freq L2]

Between the leveling amplifier output and the re-radiating antenna input is an RF network comprised of a signal-boosting amplifier (MiniCircuits P/N ZX60-33LN), an 8-way RF power splitter (MiniCircuits P/N ZN8PD1-53+) with 3 utilized output ports (unused ports are terminated with 50-ohm loads). Each utilized output port has a coaxial attenuator and a cable connecting to the re-radiating antenna. Compliance is calculated for each path below.

ENG LAB PATH
The re-radiating antenna is connected to the RF splitter through a 10 dB attenuator and a 6 foot coaxial cable (Times LMR200). Calculating LS2 to use in Equation 2:

(7) LS2 = Lcable_3 + Gamp + Lsplitter + Latten + Lcable_4

Where:

Lcable_3 = 0 dB (no cable between leveling amp and in-line amp)
Gamp = Gain of in-line amplifier = 16.4 dB [L1], 17.9 dB [L2]
Lsplitter = attenuation from RF splitter = −9.7 dB [L1], −9.6 dB [L2]
Latten = attenuation from coaxial attenuator = −10.0 dB [L1 & L2]
Lcable_4 = attenuation of 6 ft LMR200 cable = −0.8 dB [L1], −0.7 dB [L2]

LS2 = 0 dB + 16.4 dB − 9.7 dB − 10 dB − 0.8 dB = −4.1 dB [for freq L1]
LS2 = 0 dB + 17.9 dB − 9.6 dB − 10 dB − 0.7 dB = −2.4 dB [for freq L2]

Therefore the signal strength at a point 100 feet away from the building from Equation 2 is calculated:

Psig = −77 dBm – 4.1 dB + 2.7 dBic – 66.1 dB = −144.5 dBm [for freq L1]
Psig = −77 dBm – 2.4 dB + 1.5 dBic – 63.9 dB = −141.8 dBm [for freq L2]

This demonstrates compliance to the -140 dBm requirement for the ENG LAB Path.

Converting the re-radiated power based on EIRP at 100 ft from the building to ERP in pico-watts from the re-radiating antenna requires the subtraction of 2.148:

For L1
$Prad_{(ERP)}$ = Psig − 2.148 − Lprop
= −144.5 dBm − 2.148 − (−66.1 dB)
= −80.548 dBm
= 8.81 pW (which is less than the maximum 72.78 pW in the license)

For L2
$Prad_{(ERP)}$ = Psig − 2.148 − Lprop
= −141.8 dBm − 2.148 − (−63.9 dB)
= −80.048 dBm
= 9.89 pW (which is less than the maximum 41.88 pW in the license)

BSOT LAB PATH

The re-radiating antenna connected to the RF splitter through a 100 foot coaxial cable (Times LMR200). Calculating LS2 to use in Equation 2:

(8) LS2 = Lcable_3 + Gamp + Lsplitter + Latten + Lcable_4

Where:

Lcable_3 = 0 dB (no cable between leveling amp and in-line amp)
Gamp = Gain of in-line amplifier = 16.4 dB [L1], 17.9 dB [L2]
Lsplitter = attenuation from RF splitter = −9.7 dB [L1], −9.6 dB [L2]
Latten = no coaxial attenuator = 0 dB [L1 & L2]
Lcable_4 = attenuation of 100 ft LMR200 cable = −13.2 dB [L1], −11.7 dB [L2]

LS2 = 0 dB + 16.4 dB − 9.7 dB − 0 dB − 13.2 dB = −6.5 dB [for freq L1]
LS2 = 0 dB + 17.9 dB − 9.6 dB − 0 dB − 11.7 dB = −3.4 dB [for freq L2]

Therefore the signal strength at a point 100 feet away from the building from Equation 2 is calculated:

Psig = −77 dBm – 6.5 dB + 2.7 dBic – 66.1 dB = −146.9 dBm [for freq L1]
Psig = −77 dBm – 3.4 dB + 1.5 dBic – 63.9 dB = −142.8 dBm [for freq L2]

This demonstrates compliance to the -140 dBm requirement for the BSOT LAB Path.

Converting the re-radiated power based on EIRP at 100 ft from the building to ERP in pico-watts from the re-radiating antenna requires the subtraction of 2.148:

For L1
$Prad_{(ERP)}$ = Psig – 2.148 – Lprop
= −146.9 dBm – 2.148 – (−66.1 dB)
= −82.948 dBm
= 5.07 pW (which is less than the maximum 72.78 pW in the license)

For L2
$Prad_{(ERP)}$ = Psig – 2.148 – Lprop
= −142.8 dBm – 2.148 – (−63.9 dB)
= −81.048 dBm
= 7.86 pW (which is less than the maximum 41.88 pW in the license)

CHAMBERS PATH
The signal from the RF splitter is connected via 80 ft cable (Time LMR-200) to a 2-way splitter, with each output connecting to a re-radiating antenna via a 55 ft coaxial cable. Calculating LS2 to use in Equation 2:

(9) LS2 = Lcable_3 + Gamp + Lsplitter + Latten + Lcable_4 + Lsplitter2 + Lcable_5

Where:
Lcable_3 = 0 dB (no cable between leveling amp and in-line amp)
Gamp = Gain of in-line amplifier = 16.4 dB [L1], 17.9 dB [L2]
Lsplitter = attenuation from RF splitter = −9.7 dB [L1], −9.6 dB [L2]
Latten = no coaxial attenuator = 0 dB [L1 & L2]
Lcable_4 = attenuation of 80 ft LMR200 cable = −10.6 dB [L1], −9.4 dB [L2]
Lsplitter2 = attenuation from RF splitter = −3.2 dB [L1], −3.2 dB [L2]
Lcable_5 = attenuation of 55 ft LMR200 cable = −7.3 dB [L1], −6.5 dB [L2]

LS2 = 0 dB + 16.4 dB – 9.7 dB −0 dB – 10.6 dB – 3.2 dB −7.3 dB = −14.4 dB [for freq L1]
LS2 = 0 dB + 17.9 dB – 9.6 dB −0 dB – 9.4 dB – 3.2 dB −6.5 dB = −10.8 dB [for freq L2]

Therefore the signal strength at a point 100 feet away from the building from Equation 2 is calculated:

Psig = −77 dBm – 14.4 dB + 2.7 dBic – 66.1 dB = −154.8 dBm [for freq L1]
Psig = −77 dBm – 10.8 dB + 1.5 dBic – 63.9 dB = −150.2 dBm [for freq L2]

This demonstrates compliance to the -140 dBm requirement for the CHAMBERS Path.

Converting the re-radiated power based on EIRP at 100 ft from the building to ERP in pico-watts from the re-radiating antenna requires the subtraction of 2.148:

For L1

$Prad_{(ERP)}$ = Psig − 2.148 − Lprop
= −154.8 dBm − 2.148 − (−66.1 dB)
= −90.848 dBm
= 0.82 pW (which is less than the maximum 72.78 pW in the license)

For L2

$Prad_{(ERP)}$ = Psig − 2.148 − Lprop
= −150.2 dBm − 2.148 − (−63.9 dB)
= −88.848 dBm
= 1.43 pW (which is less than the maximum 41.88 pW in the license)

CHAMBERS PATH – New antenna on one leg

At the time of renewal, the re-radiating antenna (Antcom P/N 2.3G1215P-XRS-4) on one of the legs of the Chambers Path will be replaced with an alternate antenna (Taoglas TG.30.8111W) with a maximum gain of 3.0 dBi.

Therefore the signal strength at a point 100 feet away from the building from Equation 2 is calculated:

Psig = −77 dBm – 14.4 dB + 3.0 dBic – 66.1 dB = −154.5 dBm [for freq L1]
Psig = −77 dBm – 10.8 dB + 3.0 dBic – 63.9 dB = −148.7 dBm [for freq L2]

This demonstrates compliance to the -140 dBm requirement for the CHAMBERS Path with the alternate antenna.

Converting the re-radiated power based on EIRP at 100 ft from the building to ERP in pico-watts from the re-radiating antenna requires the subtraction of 2.148:

For L1

$Prad_{(ERP)}$ = Psig − 2.148 − Lprop
= −154.5 dBm − 2.148 − (−66.1 dB)
= −90.548 dBm
= 0.88 pW (which is less than the maximum 72.78 pW in the license)

For L2

$Prad_{(ERP)}$ = Psig − 2.148 − Lprop
= −148.7 dBm − 2.148 − (−63.9 dB)
= −86.948 dBm
= 2.02 pW (which is less than the maximum 41.88 pW in the license)