March 27, 2000

Federal Communications Commission
Authorization and Standards Division
7435 Oakland Mills Rd
Columbia, M.D. 21046

Dear sir
Re: FCC ID: N7NAB300A Grantee: Sierra Wireless Inc.
This letter is in response to your request for additional information in you email of Thursday, March 23, 2000, Correspondence reference number 12966.

## Re: question 1.

Dimensions of the antennas used are shown in the following chart in mm. A key to these dimensions are given in the accompanying diagram.

|  | A <br> lower element | C <br> Coil length | D <br> Upper element | E <br> Overall height |
| :--- | :--- | :--- | :--- | :--- |
| Antenna \#1 | 65 | 45 | 185 | 315 |
| Antenna \#2 | 100 | 80 | 210 | 400 |
| Antenna \#3 | A+C $=142$ | Can't measure | 160 | 320 |
| Antenna \#4 | 65 | 50 | 225 | 365 |
| Antenna \#5 | 75 | 50 | 225 | 375 |

The designation "Antenna \#1, \#2 " etc. correspond to the designations shown in sections 5.5 and 5.6 of the MPE test report.


## Re: question 2

Measurements were done identically for each antenna tested. For each test distance, MPE was measured for all directions and also up and down along side the antenna from base to tip. The value reported in each case is the maximum peak power density measured at that distance.

The cables for each antenna were cut to a length of 1 meter before the tests. Each cable is RG58C or equivalent, with a nominal attenuation of 63 dB per 100 meters at 850 MHz . This results in a nominal loss of 0.63 dB .

The field probe used comes with the meter, in this case the Holaday Industries Inc Model HI-3004EX Field Strength Meter. This is an Isotropic field probe with a working frequency range of 1 to $1000 \mathrm{MHz},+/-$ 1 dB . This probe is currently calibrated and is due for next calibration on December 29, 2000. The rated uncertainty of the meter was added to the readings.

## Re: question 3

Please find the revised manual pages in the attachment "rev2 manual pages". The antenna requirements are found on pages 2 and 3 of that attachment. As your email did not include the proposed grant conditions, I referred to the conditions on the grant of our recent similar application for FCC ID: LL9MP200V for guidelines. The revised dimensions shown in the manual diagram are derived by multiplying the smallest dimension from our 5 test samples by 0.9 ( $10 \%$ less), and by multiplying the largest dimension from our 5 test samples by 1.1. I then reduced the maximums for the upper element and coil length by a small amount so that the sum of the three sections did not exceed the recommended maximum overall height, as this would be confusing to the customer.

## Re: question 4

We confirm that the MPE report should indicate 4 W conducted at the antenna terminal, rather than 4 W ERP. This error was made on the title page, on the Verification of Compliance page, and in section 2 of the report. We regret this error.

We trust these responses adequately address your questions.

Sincerely

Ron Vanderhelm
Director, RF Development
Sierra Wireless Inc.

