American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

May 31, 2007

RE: Airorlite Communications, Inc.

FCC ID: UT650289BA8470DL

After a review of the submitted information, I have a few comments on the above referenced Application. Depending on your responses, kindly understand there may be additional comments.

1) Internal photographs appear to be missing:
a) Bottom view of amplifier, amplifier predriver, microcontroller, communication board, channel card board, and LNA/splitter board
b) Top and Bottom of one amplifier was not provided. Although similar, one amplifier appears to have a drive level adjustment and therefore possibly different internally. Even the block diagram shows some constructional differences between the 2 amplfiers (i.e. isolator, key circuit, tap, etc.) Note: Additionally, the uplink and downlink internal photos appear identical, while the block diagram shows some constructional differences. Please review and correct as necessary.

Response: Please see the revised internal photograph exhibit uploaded with this response.

2) Labeling should be shown for the device being approved only and not reference other FCC ID's as well. Kindly remove the downlink labeling from the labeling exhibit information provided.

Response: Please see the revised label exhibit uploaded with this response.

3) 731 form and page of of the test report cites 26.2 Watts, but tune up and operational description and test report page 6 cite 31 dBm composite power (1.3 Watts). I believe that the 26.2 should be specified as dBm per carrier. Please review, explain, correct as necessary.

Response: 26.2 is indeed dBm per carrier as shown in the original test report on pages 1 and 7.

4) According to 90.219, under certain criteria the licensee may deploy certain types of signal boosters without further authorization. Therefore the justification of RF exposure being required during site licensing/implementation is not considered correct. Therefore, kindly provide information regarding RF exposure, and also update the manual as necessary to define safe distances. See attached information as well. Normally these are defined as fixed units attached to indoor or outdoor permanent fixtures. For this application (downlink), indoor antenna are treated as mobile antennas, even if fixed mounted because of the capability of proximity to humans. However per 2.1091, if categorical levels are not met (i.e. 1.5 Watts ERP = 2.46 Watt EIRP, then RF exposure measurements are required (i.e. MPE measurements). Please review/address as necessary.

Response: Please see the revised test report and RF exposure exhibit uploaded with this response.

5) Justification as to the F8E designator to be approved should be provided. Also as submitted this device will only be approved for F8E signals. For instance while radiated spurious may use a CW signal, conducted spurious requires to test all modulation types [F8E, etc.] at low, mid. and high frequency. It is uncertain if this is covered appropriately.

Response: The EUT is only used with FM analog signals. We feel that F8E is the appropriate emission designator and that testing represents worst case operation.

6) Please justify use of 43 + 10 log for spurious emissions. According to 90.210 depending on intended signals this is ti use, the limits could be 43, 50, or 55 + 10 log.

Response: The EUT will never be used with 12.5 kHz or 6.25 kHz or less equipment. 43 + 10 log was the appropriate limit.

7) For occupied bandwidth test, the input waveform is typically compared to the output waveform and shown to not affect bandwidth. This info does not appear to be provided (i.e. input waveforms).

Response: Please see the revised test report uploaded with this response.

8) There does not appear to be information to support/explain the proper selection of the input drive level and justify the maximum input rating and maximum gain settings for all tests. Given this is basically an amplifier, this should be documented/justified.

Response: In addition to the information submitted on page 7 of the original test report, the manufacturer states:

The input drive level is a variable ranging from -90 dBm to a maximum of -50 dBm. We chose the upper limit from experience since signal levels higher than that are rare. For input levels greater than -50 dBm the channel cards are attenuated via the attenuator on board the channel.

Since the channel card has a limiting amplifier, U 1 of the output board, an input of greater than -90 dBm is limited by this circuit. The limited level at the channel card, combiner cascade is -20 dBm for all input levels above -90 dBm.

The amplifiers are level controlled via an AGC loop. This level control is a factory adjustment and is set to have a composite of + 31 dBm.

9) FCC requires to show that the applicant has been informed of appropriate booster rules such as include exhibit or correspondence showing applicant was informed that boosters must meet all criteria stated in Sections 90.219 for related booster/inbuilding operations. NOTE: Please explain/define this device as a Class A/B under 90.219 as well.

Response: Please see the 90.219 attestation letter uploaded with this response. The device is a Class A amplifier which has narrowband filtering via crystal filters.

10) Kindly explain compliance to 90.219, 5 Watt ERP requirements. Note that with a composite 31 dBm and 10 dBi gain antenna, this may be exceeded.

Response: The downlink antenna is a leaky coax with 60 dB coupling. -20 dBi is more representative of the leaky coax gain than the 10 dBi antenna (this was the max for the uplink and was inadvertently included with the downlink). Please see the revised test report uploaded with this response which shows that the EUT meets the 5 W ERP requirement.

11) Intermodulation test requires one test with 3 signals, or 2 tests using 2 signals near upper and 2 signals near lower part of the band. Testing does not appear to support this. See attached guidance.

Response: Please see the revised test report uploaded with this response.

Timothy R. Johnson Examining Engineer

mailto: tjohnson@AmericanTCB.com

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.