May 1, 2002
RE: FCC ID: PL6-MMDS-BTS-R1
I have a few comments on this Application.
Please note that this device does not appear to comply with the FCC rules. See item 6.
1 Your report states a conducted RF Power measurement of 37dBm (5 watts). You further state the EIRP in 33dBW (1995 watts). Yet, you have provided no information about the antenna necessary to obtain this EIRP. Please note that calculations used in reports must be justified. Please provide the necessary antenna information (gain, type, etc.) and a sample calculation of how you obtained the EIRP for this device.

The +33 dBW stated in the summary table of the report is the minimum specification limit from the FCC rules. Because this is a licensed device the rf output power that goes on the grant is usually the power output at the antenna port. The type of antenna, the gain, and the propagation pattern are regulated during the licensing phase by the Mass Media Bureau. The rf power output that should be listed on the grant is 5 Watts.

2 No tune up procedure was provided. Please note that the FCC requires this. Please provide the tune up procedure for this device.

I have uploaded the tuneup procedure to the ATCB site.

3 No operational or technical description was provided. Also, please note that the users/installation manual is incomplete. The FCC requires this information to be submitted with the application. Please provide a complete manual and either a technical description or operational description for the device.

I have uploaded the technical description to the ATCB site.
I only uploaded the parts of the manual that contain the required FCC statements because the entire manual is close to 30 megabytes in PDF form (600 dpi). I can send the hardcopy to you if you wish or put the electronic copy on CD-R and ship it. Please let me know what you prefer.

4 Please provide a simplified Block diagram of the system.

I have uploaded a Block Diagram of the system on the ATCB site.

5 The occupied bandwidth plot header states a resolution and video BW of 10 MHz, yet the plot shows a resolution BW of 50kHz and a video BW of 500 kHz. Please correct the header data in the report to match the plot data so the report is consistent.

I have uploaded a revised test report that contains this correction. See also page 38 for frequency stability data.

6 The frequency stability data/plots did are not present in the report. Please provide the frequency stability information. Please note that 21.101 (Frequency Tolerance) allows 0.005% deviation over the temperature and voltage variation range. Part 2 specifies the frequency stability for this type device (i.e. 2.1055 (a)1) to be within the tolerance range over the temperature variation of –30 degrees C to +50 degrees C. Since the device ceased operation below 0 degree C, and since no information to the contrary (i.e. no technical description/operational description or technical specifications) were provided, it can only be concluded that the device is not in compliance with the rules. Please provide evidence that this device meets the required frequency stability tolerances specified in CFR 47.

Please see revised test report, page 38. As far as the temperature range is concerned: The FCC rules do not require that the system operate over the entire range, only that the frequency tolerance meets the requirement. This system is designed to shut down automatically when operating outside the temperature range 0 degrees Celsius - +60 degrees Celsius. We

monitored the system as we decreased temperature below 0 degrees and noted that the carrier shut down completely at around –2 degrees Celsius. There was no drift in frequency between 0 degrees and –2 degrees.