

July 3, 2002

American Telecommunications Certification Body, Inc.  
6731 Whittier Avenue  
Suite C110  
McLean, VA 22101

RE: Certification Application  
FCC ID: AB6 OUD 850S8000

This letter is in reference to the transmitter tests performed on the S8000 Indoor and Outdoor systems.

Transmitter tests for the S8000 850 MHz system were only performed on the Indoor system. This was done because the Indoor system is worst case for emissions. This conclusion is based on the physical characteristics of the system as summarized below. See the Reference Manual for the Indoor and Outdoor S8000 systems for further details.

The Outdoor system has a climactically sealed cabinet that, in addition to providing environmental protection to the system, also provided greater shielding to EM radiation. The climactic control system on the Outdoor system provides better EM shielding than is present through the ventilation system grills on the Indoor system. This additional climactic control also maintains the Outdoor system at a lower temperature than the Indoor system.

The Indoor systems cabinet is more open and thus has less shielding to EM radiation. The unsealed nature of this system, especially in terms of the ventilation system, increases the probability of emissions from this cabinet. The presences of unsealed, unshielded, external cable interfaces on the Indoor cabinet further increase the probability of emissions present on the Indoor cabinet that would not be present on the Outdoor cabinet. The cooling system for the Indoor system utilizes fans that circulate the room air throughout the system. Because the temperature of the air used for cooling is dependant on the room temperature, the Indoor system temperature is highly dependant on the room temperature. Additionally the temperature of the air, cooling the various modules in the system, is dependant on what modules the air has already flowed through. In the case of the PA's, the air hitting the cooling fins of the PA's has already passed by the DRX's thus increasing its temperature. The increased system temperature is worst case for emissions, and this in addition to the shielding properties of the Indoor cabinet make the indoor system the worst case overall for emissions.

For these reasons, test data for the Indoor system is used to indicate a pass for the Outdoor system as well.

Thank you for your attention to this matter.

Sincerely,

A. Drici  
Nortel Networks  
GSM BTS R&D

