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## VIA HAND DELIVERY

June 4, 2004

**Satellite and  
Radiocommunications Division  
International Bureau**

RECEIVED

JUN - 4 2004

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Marlene H. Dortch, Secretary  
Federal Communications Commission  
Office of the Secretary  
c/o Natek, Inc.  
236 Massachusetts Avenue, N.E.  
Suite 110  
Washington, DC 20002

Re: Supplemental Reply of AvL Technologies, Inc.  
Earth Station Application, FCC File No. SES-MOD-20040225-00277, E030130

Dear Sir or Madam:

Attached please find an original and (5) five copies of the Supplemental Reply letter of AvL Technologies, Inc, in the above-referenced matter.

As this Reply addresses new matters raised in the Swe-Dish Communications, Inc. Reply, also in this matter, and is intended to prevent any misunderstandings, AvL respectfully requests that the Commission accept this unauthorized pleading.

Best regards,



William K. Coulter

Enclosures

# AvL TECHNOLOGIES

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June 4, 2004

Marlene H. Dortch, Secretary  
Federal Communications Commission  
Office of the Secretary  
c/o Natek, Inc.  
236 Massachusetts Avenue, N.E.  
Suite 110  
Washington, DC 20002

Re: AvL Technologies, Inc.  
Earth Station Application, FCC File No. SES-MOD-20040225-00277  
E030130

Dear Ms. Dortch:

AvL herein responds to the new matters raised by SWE-DISH in its Reply in order to clarify several matters and to prevent any misunderstandings. AvL would be happy to provide any additional information requested by the FCC concerning these comments, if deemed desirable.

**Pointing Accuracy** - The AvL/Tracstar auto-acquisition system has been fully evaluated by the major satellite operators, including all those affected by AvL's Application. The claims and statements by AvL in the Application concerning the initial pointing ability and maintaining pointing in environmental conditions are accurate and they are supported by the included affidavits in the Application from PanAmSat and SES Americom.

**Polarization Adjustment** – To prevent any misunderstanding, AvL notes that the reflector/feed is not rotated, so the elevation patterns are parallel to the orbital arc. The H/V polarization is manually set with respect to the reflector prior to commissioning each antenna based on the designated Tx polarization for the service the antenna is to be used on. Once the cross-pol is optimized at commissioning, the automatic controller rotates the reflector-feed system to the proper polarization angle with respect to the satellite based on GPS data and tilt of the base of the antenna. If desired, H/V can be swapped manually by rotating the OMT.

**Radiation Hazard** – SWE-DISH is correct in that radiation hazard of satellite antennas always should be considered. This has been done. Since the reflector spillover for the AvL products are comparable with numerous antennas greater than 1.2M licensed by the FCC, special emphasis was not given to this aspect in the initial submission. The initial radiation hazard study submitted thus was incomplete, due to a

Marlene H. Dortch, Secretary

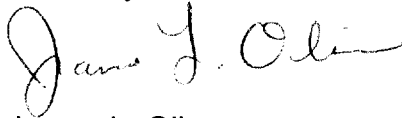
June 4, 2004

Page 2

computer program malfunction. Additional analyses has been submitted with complete data. The spike at 180° was confirmed to be merely range reflection. It is clear from both AvL's and SWE-DISH Radiation Hazard Studies that the area in front of the antennas must be controlled to avoid exposing humans to harmful radiation. Rear radiation in the near field can only be estimated by either FTC formula of -20 dB from on axis or by the method SWE-DISH used of Power/Area. All parties, including AvL and SWE-DISH, should take actual measurements and post appropriate radiation hazard warnings per OSHA standards. AvL will do this.

Other Matters – As AvL stated in the response of May 20, 2004, all 1M patterns are from a segmented 1M reflector and AvL does not manufacturer a solid 1 meter reflector at this time.

Sincerely,

A handwritten signature in cursive script, appearing to read "James L. Oliver".

James L. Oliver  
President

cc: Maury J. Mechanick, White & Case, LLP  
(Counsel to SWE-DISH Satellite Communications, Inc.)  
William K. Coulter, (Counsel to AvL)

CERTIFICATE OF SERVICE

I, Christine L. Zepka, hereby certify that on this 4th day of June 2004, a true and correct copy of the foregoing "Supplemental Reply of AvL Technologies, Inc." was sent via first class mail to the following parties:

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Christine L. Zepka

\* via Hand Delivery