November 13, 1998

RF Exposure Evaluation Report for Motorola mobile satellite transceiver (FCC ID IHDT6NE1).

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The Motorola Personal Communications Sector Product Safety Laboratory has evaluated the IRIDIUM™ Satellite Series 9520 product, FCC ID IHDT6NE1, for the need to conduct RF exposure testing. Due to the design and installation of this product, it qualifies for the exclusion called out in Federal Communications Commission section 47 CFR § 2.1091 titled "Radiofrequency radiation exposure evaluation: mobile devices."

In section § 2.1091, paragraph (b) defines a mobile device as "a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons." The IRIDIUM™ Satellite Series 9520 transceiver is intended to be installed into a vehicle or fixed site such that the transceiver is physically secured at one location. According to the *Motorola Satellite Series Mobile Accessory Antenna Installation Guideline*, the antenna is to be located outside of the vehicle and "it's location should be such that at least 40 cm of conductive horizontal surface extends in all directions from the center of the antenna…" Also, according to the *Motorola Satellite Series Fixed Site Accessory Antenna Installation Guideline*, "it's location should be reasonably clear of nearby metal obstructions and such that a distance of at least 20 cm is maintained between the antenna and the user." The installation guidelines describe the recommended installation of both the transceiver and the external antenna for the mobile and fixed site applications. Based on the installation of the transceiver and the antenna, the transmitter's radiating structure is more than 20 centimeters from the user. Thus the IRIDIUM™ Satellite Series 9520 is a "mobile device" as defined in section § 2.1091 paragraph (b).

Paragraph (c) gives the descriptions of types of mobile devices that are subject to routine environmental evaluation for RF exposure based on frequencies of operation and transmit EIRP. The IRIDIUM™ Satellite Series 9520 operates at a transmit frequency of 1616 to 1626 MHz. It has a transmit conducted power of 0.6 Watt. The maximum EIRP is produced with the mobile antenna which has a maximum gain of 0.37 dBi, and minimum cable loss of 1.7 dB, together resulting in a maximum EIRP of 0.44 Watts. Since the transceiver's transmit frequency is above 1.5 GHz and its EIRP with the supplied antenna is below 3 Watts, the IRIDIUM™ Satellite Series 9520 is "categorically excluded from routine environmental evaluation" per paragraph (c), and thus RF exposure measurement is not required.

A picture of the IRIDIUM™ Satellite Series 9520 product is shown in picture 1 below.

Picture 1.