## RESPONSE TO CORRESPONDENCE 22086

1. The circuit board layout changes occur within a fully shielded container which is described in the radio case shielding section on page 3 of the SAR Compliance Testing Report (see below). As a consequence, no change to the SAR should be expected.

**(Excerpt from SAR Compliance Report)**

**Radio Case Shielding**

A cross sectional diagram of the P-801T handset showing the shielding is attached as Fig. 2. The high-power amplifier (HPA) is enclosed in a 0.008" thick aluminum shield. The minimum shielding effectiveness occurs at the lowest frequency, 806 MHz. At this frequency, the shield attenuates the energy 8.7 dB for each 0.000118 inch of aluminum thickness. Therefore, the theoretical HPA shield effectiveness is over 500 dB. Taking into account shield discontinuities, the minimum expected shield attenuation is 40 dB. Therefore, the signal level leaking out of the HPA shield will not exceed -3.5 dBm or less than one-half milliwatt..

The HPA driving circuitry is on the bottom of the transceiver board (as shown in Fig. 2). Above the transceiver, it sees the PK groundplane (0.0007 inches of copper thickness) plus two additional groundplanes in the transceiver board for a total thickness of 0.0021" of copper. The maximum drive level to the HPA is +17 dBm when the drive amplifier is saturated. The groundplanes will also give about 40 dB isolation due to discontinuities. Therefore, the leakage signal due to the HPA drive circuitry will be -23 dBm.

Below the HPA and HPA drive circuitry is a solid aluminum chassis, which provides complete shielding. Therefore, the maximum signal leakage will be out of the top of the radio (as shown in Fig. 2) and to the extent discussed above, as a worst case.

The two configurations tested for the P-801T Portable Radio of Fig. 1 are as follows:

**Configuration 1.** The model P-801T Radio with "1/2 wave" antenna held at 1" in front of the mouth. A visualization of this configuration in front of the Utah anatomic model of the head is given in Fig. 3.

**Configuration 2.** The radio with "1/2 wave" antenna in a holster for belt mounting at waist against say, the back left side of the body. A photograph of the holster for belt mounting the equipment is shown in Fig. 4. Figure 5 gives dimensions of the holster, indicating minimum separation of the back of

the equipment from the user's garments. Figure 5 also provides a detail of the metal swivel that is part of the holster. A visualization of this configuration as against the Utah anatomic model of the body is given in Fig. 6. As seen in Fig. 5, there is a belt clip metallic component of square dimensions 1.5" × 1.5" and thickness 1.25". This metallic clip of detailed shape given in Fig. 5b was modeled by voxels of dimensions $2.961 \times 2.961 \times 3$ mm for a complete geometry that is visualized in Fig. 6.