

ANNEX R

COMMUNICATIONS

Electromagnetic Pulse (EMP) Protection: EMP is comparable to lightning, but its distributed effect is many times more intense; its area of influence is significantly larger, and its rise time to peak voltage is much shorter. One critical problem resulting from EMP is failure of electronics systems caused by burnout, uncoupling, or other malfunction of electrical networks and components. While some electrical components are more sensitive to EMP than others, the potential current is large enough to cause damage to most unprotected electronic systems. The most economical means of providing EMP protection at an ERS is to place a metallic (lead base) enclosure around the areas containing the equipment to be protected. Other considerations include suitable EMP grounding, shunting devices across wiring penetrating an enclosure, wave guides for dissipating electrical openings, shortening cables to antennas or other metallic conductors of electrical energy, and disconnecting the power source.