

GENERAL SAFETY PRECAUTIONS

MICROWAVE RADIATION

WAVEGUIDE HOT-PATCHING AND RADIATION PROTECTIVE GARMENT

1. GENERAL

1.001 This addendum supplements Section 010-150-002.

1.002 It is reissued to clarify the conditions under which personnel must wear protective clothing to guard against exposure to excessive microwave radiation.

1.003 Information contained in the previous addendum about microwave radiation limits as they apply in the Pacific Company and Nevada Bell is retained.

1.004 In addition to waveguide hot-patching, the provisions of this section also apply to working in front of microwave antennas.

3. SAFE LIMITS FOR MICROWAVE RADIATION

The following changes apply to Part 3 of the section:

- (a) 3.01 — revised
- (b) 3.02 and 3.04 — omitted
- (c) 3.05 — revised

3.01 Because use of the Temperature Humidity Index (THI) as defined in Section 010-150-001 is impractical under field conditions, the Pacific Company and Nevada Bell have retained until further notice, the earlier microwave radiation limits adopted by the Bell System. These are based solely on the average power density of the nonionizing radio fields. The limits are in agreement with, or more conservative than, the United States of America Standards Institute, Standard C95.1 — 1966. They are as follows:

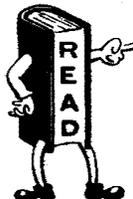
- (a) 0-1 mw/cm²: Safe for continuous exposure or permanent assignment.

(b) 1-10 mw/cm²: Safe for exposure on a casual or incidental basis only.

(c) Above 10 mw/cm²: Areas of this field intensity are considered potentially hazardous.

3.05 The governing conditions under which personnel must wear the protective garment today are as follows:

- (a) All personnel must wear the Goodall Rubber Company Wave Guard suit during all work operations (inside or outside) involving open waveguides and antennas (containing 30 watts or more of power) that are common to any or all microwave systems and considered "hot" or in service. By "common" is meant the waveguide beyond the first channel dropping network (toward the antenna).



Caution: If there is any doubt as to the total power at the point of a "hot patch" or the accuracy of waveguide drawings, protective clothing must be worn.

- (b) Under no circumstances, should a suit of a different manufacturer be used for these purposes. (Ordering information for the Goodall Rubber Company Wave Guard suit can be found in Section 010-150-001).

Note: Protection from the microwave suit is not adequate where land mobile base systems are concerned. Consequently, no work operation should be attempted on these systems before all transmitters are turned down.

6. REFERENCE

The following changes apply to Part 6 of the section

- (a) 6.01 — additions to Table A

TABLE A

POWER RATINGS OF VARIOUS MICROWAVE SYSTEMS IN CURRENT USE

MANUFACTURER	SYSTEM	RF POWER OUTPUT (WATTS/CHANNEL)
WESTERN ELECTRIC	TE TD-2A TD-2-5W TH-3	0.5 2.0 5.0 20.0