RHSC - April 1995 Approved:_____
Chairman - RHSC

WORCESTER POLYTECHNIC INSTITUTE
HEALTH PHYSICS PROCEDURE HP-24
ESTIMATION OF SKIN DOSE

1. PURPOSE:

To estimate the dose received by the skin of an individual with contamination of the skin.

2. FREQUENCY:

Upon receipt of notice of an accidental skin contamination that could potentially result in an exposure greater than 10CFR20 limits.

3. MATERIALS, TOOLS, AND EQUIPMENT:

3.1. Thin window Geiger detector.

3.2. The Radiological Health Handbook.

4. PRECAUTIONS:

4.1. Ensure that all appropriate health physics practices are followed throughout the procedure.

4.2. Take all necessary precautions to avoid the spread of possible contamination.

4.3. Perform an operablility check on all instrumentation used. Ensure that the instrumentation has been calibrated within the proper time limit.

5. INSTRUCTIONS:

5.1. Estimate the surface area of the skin contamination based upon the experimenter's observations.

5.2. Estimate the activity per unit area based upon the experimenter's records, data, and experimental procedure.

5.3. Estimate the amount of time the skin was contaminated based upon the experimenter's observation.

5.4. Using the above estimates, and utilizing an appropriate conversion table, such as Table 13.10 "Dose Rate Factors in Skin for Selected Radionuclides" of The Radiological Health Handbook (Revised 1992), The skin dose my then be estimated.

5.5 If the estimated skin dose exceeds 10CFR20 limits, report shall be filed in accordance with 10CFR20 requirements.

5.6. Submit the experimenters dosimetry for immediate processing.

6. RESTORATION:

None

7. REFERENCES:

The Radiological Health Handbook