ATTACHMENT I

ITEM 19
EMERGENCY PROCEDURES

PROCEDURES

1. MINOR SPILLS **(INCLUDE LICENSEE DEFINITION HERE)**

   A. NOTIFY: Notify persons in the area that a spill has occurred.

   B. PREVENT THE SPREAD: Cover the spill with absorbent paper.

   C. CLEAN UP: Use disposable gloves and absorbent paper. Carefully fold the absorbent paper with the clean side out and place in a labeled plastic bag for transfer to a radioactive waste container. Also put contaminated gloves and any other contaminated disposable material in the bag.

   D. SURVEY: With a low-range radiation detection survey meter. Check the area around the spill. Also check your hands, clothing and shoes for contamination.

   E. REPORT: Report the incident to the Radiation Safety Officer.

   F. DOCUMENT: Complete the Radioactive Spill Report and the Radioactive Contamination Survey forms (See Figure I-1 and Figure I-2).

2. MAJOR SPILLS **(INCLUDE LICENSEE DEFINITION HERE)**

   A. CLEAR THE AREA: Notify all persons not involved in the spill to vacate the room.

   B. PREVENT THE SPREAD: Cover the spill with absorbent paper, but do not attempt to clean it up. To prevent the spread of contamination, limit the movement of all personnel who may be contaminated.

   C. SHIELD THE SOURCE: If possible, shield the spill. This should be done only if it can be done without further contamination or a significant increase in radiation exposure.

   D. CLOSE THE ROOM: Lock or otherwise secure the area to prevent entry.

   E. CALL FOR HELP: Notify the RSO immediately.

   F. PERSONNEL DECONTAMINATION: Remove contaminated clothing and flush contaminated skin with lukewarm water and then wash with mild soap. If contamination remains, induce perspiration by covering the area with plastic. Then wash the affected area again to remove any contamination that was released by the perspiration.

   G. CLEANUP: The RSO will supervise the cleanup of the spill and will complete the Radioactive Spill Report and the Radioactive Spill Contamination Survey report forms (See Figure I-1 and Figure I-2).

RADIATION SAFETY OFFICER _____

OFFICE PHONE: _____

CELL PHONE _____

ALTERNATE NAMES AND TELEPHONE NUMBERS DESIGNATED BY RSO:

_____ _____

_____ _____

_____ _____

SIGNATURE **DATE**

The following is not part of the model spill procedures but is provided for your information.

The decision to implement a major spill procedure instead of a minor spill procedure depends on many incident-specific variables such as the number of individuals affected, other hazards present, likelihood of spread of contamination, and types of surfaces contaminated as well as the radiotoxicity of the spilled material. For some spills of short-lived radionuclides the best spill procedure may be restricted access pending complete decay. Table I-1 may be used as general guidance to determine whether a major spill procedure or a minor spill procedure should be implemented.

TABLE I-1

RELATIVE HAZARDS OF COMMON RADIONUCLIDES

Estimate the amount of radioactivity spilled. Initiate a major or minor spill procedure based on the following dividing line. Spills above these millicurie amounts are considered major, below are considered minor.

Radionuclides	Millicuries	Radionuclide	Millicuries
Fluorine-18	10	Strontium-85	10
Phosphorus-32	10	Technetium-99m	100
Chromium-51	100	Indium-111	10
Cobalt-57	10	Iodine 123	10
Cobalt-58	100	Iodine-125	1
Iron-59	10	Iodine-131	1
Cobalt-60	1	Ytterbium-169	10
Gallium-67	100	Gold-198	10
Selenium-75	10	Thallium-201	100
Yttrium-90	100	Samarium-153	100
Strontium-89	100	Carbon-14	10

SPILL KIT:

6 pairs disposable gloves, 1 pair housekeeping gloves

2 disposable lab coats

2 paper hats

2 pairs shoe covers

1 roll absorbent paper with plastic backing

6 plastic trash bags with twist ties

"Radioactive Material" labeling tape

1 china pencil or marking pen

3 prestrung "Radioactive Material" labeling tags

Supplies for 10 contamination wipe samples

Instructions for "Emergency Procedures"

Clipboard with copies of Radioactive Spill Report Form and Pencil