

INDIANA AND MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

HOSPITAL ASSISTANCE PLAN

1.0 GENERAL

All Company safety policies and procedures applicable to conventional generating plant operations apply to the Donald C. Cook Nuclear Plant. In addition, special rules and procedures govern work involving radioactive material. Although measures have been taken to control radioactive contamination, its presence will require the implementation of special procedures governing the treatment of a person injured in a contaminated area. First, the person must be decontaminated unless the nature and/or extent of the injury makes immediate removal from the area and treatment necessary or requires treatment in the area. Second, if a wound is involved, it may become contaminated with radioactive material and complete decontamination may not be possible without aggravating the injury.

All D. C. Cook Plant Operating Department personnel, appropriate technicians and the staff have a working knowledge of decontamination procedures and all Shift Operating Engineers, Chemical and Radiation Protection Supervisors and Chemical and Radiation Protection Technicians have completed courses of instruction in First Aid. Normally one or more of these employees will be available to administer first aid while decontamination procedures are completed.

In the event the injury endangers life or limb, immediate medical treatment shall always precede decontamination procedures. Consequently, provisions have been made for contamination control at Memorial Hospital in St. Joseph and Mercy Hospital in Benton Harbor.

In cooperation with Indiana & Michigan Electric Company, the participating hospitals will have a staff of physicians and hospital personnel trained to implement the proper methods of contamination control. Indiana & Michigan Electric Company will ensure that training courses are conducted to provide hospital personnel with basic knowledge of radiation and contamination, as well as control methods. Annual conferences and refresher classes will be conducted. Also, periodic tests runs to ensure the operability of the Hospital Assistance Plan will be performed.

Indiana & Michigan Electric Company will ensure the following contamination control supplies will be furnished to the hospitals:

- | | |
|---------------------|---------|
| 1. Disposable Gowns | 24 pair |
| 2. Surgical Gloves | 24 pair |
| 3. Surgeon Caps | 12 |

4. Plastic Shoe Covers	24 pair
5. Sufficient Blotting Paper to Cover Pathway Controlled Area Boundry and Treatment Room	
6. Plastic Bags (23" x 36")	6
7. Plastic Water Containers (5 gallon)	10
8. Plastic Bags (6" x 6")	10
9. Gray Duct Tape	2 rolls
10. Radiation Tape	1 roll
11. Radiation Marking Signs,	6
12. Plastic Aprons	24
13. Portable Lead Container	1
14. A Mobile Cart or Appropriate Container in which the Above Supplies Can be Stored	
15. Portable Air Sampler with Filters/Cartridges	1
16. Surgical Masks	12

NOTE: Twelve clear plastic bags are made up containing: 2 disposable gowns; 2 plastic aprons; 2 pair gloves; 2 pair plastic shoe covers; 1 surgical mask; 1 surgical cap.

2.0 PROCEDURE FOR PLANT PERSONNEL

The procedure to be followed by plant personnel shall be determined by where the accident occurs in the plant, as well as the nature and extent of the injury.

2.1 Injury Occurring Within Radioactive Clean Section

An injury substained in a radioactive clean section of the plant will require no decontamination procedures or precautions. Necessary first aid treatment shall be administered by a qualified person and the injured person shall receive any additional medical treatment needed from a medical doctor.

2.2 Injury Occurring Within Potentially Radioactive Contaminated Section

If an injury is substained in a potentially radioactive contaminated section, precautionary measures must be taken in case radioactive contamination exists. In addition to administering necessary first aid, the following measures must be taken:

2.2.1 The injured person must be surveyed by use of a survey meter. Particular attention should be directed to the vicinity of the injury.

2.2.2 In the event the injury is a wound and the object causing injury might be contaminated, the object must be surveyed with a survey meter and a smear obtained if possible.

2.2.3 If either survey results in a detectable increase in the signal and/or a reading noticeably above background on the smear, decontamination procedures compatible with the nature of the injury shall be followed.

2.3 Injury Occurring Within A Radioactive Contaminated Area

Any person working within a radioactive contaminated area shall wear protective clothing. If protective clothing is removed in accordance with established procedures governing egress from a contaminated area, the probability of the area outside the controlled area becoming contaminated is extremely small. The nature and extent of an injury, however, shall determine the extent to which decontamination procedures are completed prior to departure from a contaminated area.

If the injury is minor and the injured person is ambulatory, he shall remove his protective clothing in accordance with procedures governing egress from the area. The nature and extent of injury shall be reported promptly to the Shift Supervisor by the injured person. The injured person shall proceed to the decontamination room for first aid and further decontamination if necessary.

If the injured person is unconscious or immobilized, the first person who becomes aware of the accident shall:

2.3.1 Notify the Shift Supervisor and report the location of the injured person and the apparent nature and extent of the injury.

2.3.2 Remain with the injured person if possible until the stretcher team arrives.

2.4 The Shift Supervisor shall dispatch a stretcher team to the scene of the accident. At least one member of the team shall be qualified to administer first aid.

The stretcher team's equipment shall include a stretcher, first aid kit and survey meter. Before the team enters the area in which the injured person is located, each member of the team should put on necessary protective clothing to avoid contamination of his personal clothing and use all normal entrance procedures.

Under the direction of the person qualified to administer first aid, the stretcher team shall remove as much of the protective clothing from the injured person as the nature and extent of injury permit, provided further contamination will not result before he is placed on the stretcher. Appropriate first aid

shall be administered to the maximum extent possible during this and other phases of operation. The injured person shall be transported by stretcher to the exit from the contaminated area or to a location where the level of radiation will permit a contamination survey to be performed. If the survey reveals the presence of significant contamination on the injured person and/or the stretcher, and the nature and extent of injury is such that decontamination procedures, or the time required to complete them, might aggravate the injured person's condition or injury, the following action shall be taken:

2.4.1 A member of the stretcher team shall promptly notify the Shift Supervisor and advise him to place the hospital phase of the plan into effect.

2.4.2 The Shift Supervisor shall:

2.4.2-1 If the emergency has no radiological complications, notify Memorial Hospital as per Attachment 1.

2.4.2-2 If the emergency has radiological complications, notify Memorial Hospital as per Attachment 2.

2.4.2-3 If treatment cannot be provided at Memorial Hospital, notify:

Mercy Hospital
960 Agard Street (Corner of Pipestone)
Benton Harbor, Michigan
Telephone: 925-8811

Request the Emergency Room charge nurse and provide information as per Attachment 1 (No Radiological Complications) and/or Attachment 2 (Radiological Complications) for Memorial Hospital.

2.4.2-4 Designate a person to arrange transportation for the injured. If ambulance service is required, contact the appropriate ambulance service.

2.4.2-5 Notify the Plant Radiation Protection Supervisor (or the Technical Superintendent, if the Plant Radiation Protection Supervisor is unavailable) and the Plant Manager (or the Assistant Plant Manager, if the Plant Manager is unavailable).

- 2.4.3 The person designated to obtain suitable transportation shall also be responsible for providing suitable material to protect the vehicle interior from contamination by the injured person or the stretcher. Plastic, paper or other material which will provide reasonable protection against contamination may be used.
- 2.4.4 The stretcher team shall carry the injured person to the vehicle.
- 2.4.5 At least one member of the Radiation Protection Section shall accompany the injured person to the hospital.
- 2.4.6 The driver of the vehicle shall deliver the injured person to the receiving desk at the rear of Memorial Hospital (See Figure 1, Attachment 3).

3.0 PROCEDURE FOR HOSPITAL PERSONNEL

3.1 Prior to Arrival of the Injured

- 3.1.1 The Treatment Room (Morgue) will be evacuated and all material or equipment not needed for treatment of the injured will be covered or removed.
- 3.1.2 The Shift Maintenance Man shall carry out the procedure outlined in Part 1 of Attachment 4 of this Plan.
- 3.1.3 All personnel to be directly involved in handling the injured or providing treatment shall wear protective clothing as per Attachment 5 of this Plan. If special precautions are needed, they will be explained during the initial call by the Shift Supervisor.

3.2 After the Injured Person is in the Treatment Room (Morgue)

- 3.2.1 The Maintenance Department shall be responsible for carrying out Part II of Attachment 4.
- 3.2.2 All persons entering the Morgue must wear appropriate protective clothing and observe all radiation control procedures.
- 3.2.3 All persons leaving the Morgue must remove protective clothing in the prescribed manner to avoid contamination of personal clothing, equipment, etc.
- 3.2.4 All persons must be monitored by Indiana & Michigan Electric Company personnel to confirm removal of contamination after protective clothing is removed. Survey

instruments will be furnished by Indiana & Michigan Electric Company.

- 3.2.5 All items removed from the Morgue must either be monitored and released as uncontaminated or sealed and marked "RADIATION - CONTAMINATED".
- 3.2.6 If, in the opinion of the treating physician, the patient must be moved to a location other than the designated Morgue, reasonable precautions must be taken to control contamination.

3.3 Decontamination and Waste Disposal After Emergency Treatment is Completed

- 3.3.1 After emergency treatment is completed, the patient shall be thoroughly decontaminated under the direction of the treating physician and Indiana & Michigan Electric Company Radiation Protection personnel. Liquid wastes from solution utilized during the decontamination process will be monitored and released if uncontaminated or sealed and marked "RADIATION - CONTAMINATION".
- 3.3.2 All solid and liquid waste will be sealed and transported to the Cook Plant for disposal by Cook Plant personnel.

Hospital Call - Industrial Accident
NO RADIOLOGICAL COMPLICATIONS

Call MEMORIAL HOSPITAL EMERGENCY ROOM - 983-8262

When the EMERGENCY ROOM personnel answer, say:

1. "My name is _____. I am the Shift Supervisor at the Cook Plant in Bridgman. (I am calling for _____ who is the Shift Supervisor at the Cook Plant in Bridgman.)"
2. "We have had an industrial injury which does not involve any radiation. I repeat, the injury does not involve any radiation."
3. "We have _____ patients with the following injuries:"

<u>Patient No.</u>	<u>Injury</u>
1.	_____

2.	_____

3.	_____

4.	_____

5.	_____

4. "The (first) ambulance should be leaving in about _____ minutes and will be brought to the EMERGENCY ROOM entrance."
5. "Are there any questions?"

HOSPITAL CALL - RADIOLOGICAL HAZARDS

Call MEMORIAL HOSPITAL - 983-8262

When the telephone is answered, say:

"This is a radiation emergency call from the Donald C. Cook Nuclear Plant. Please connect me with the Emergency Room Charge Nurse."

When the Charge Nurse answers, say:

1. "My name is _____. I am the Shift Supervisor at the Cook Plant. (I am calling for _____ who is the Shift Supervisor at the Cook Plant.)"
2. "Initiate the Donald C. Cook Plant Hospital Assistance Plan and prepare to receive radiation patients."
3. "We have _____ patients. Of these _____ are contaminated and _____ involve radiation hazards."
4. "Can you receive these patients?" Answer _____
5. "They will be transported in _____ ambulances. The first of which will leave in approximately _____ minutes. The travel time to the hospital is estimated to be 20 minutes."
6. "The following information is available on the patients."

Patient No.	Injury	Contaminated? (Yes/No)	Deconned? (Yes/No)	Radiation (Yes/No)	Radiation Level
1.					
2.					
3.					
4.					
5.					

7. "The following precautions should be observed (as recommended by Radiation Protection)."
 - a. _____ No special precautions beyond those normally provided in the Hospital Assistance Plan.
 - b. _____ Treatment personnel should wear respiratory protection.
 - c. _____ Radiation levels may create special problems. Be sure to wait for dosimetry equipment.
 - d. _____ (Other as given by Radiation Protection.)
8. "Are there any questions?"

At the conclusion of the report, the Charge Nurse will telephone the Shift Supervisor at the Donald C. Cook Nuclear Plant (465-5901) to confirm the report.

9. The Charge Nurse will notify the hospital switchboard to initiate the D. C. Cook Nuclear Plant Assistance Plan.

D. C. COOK NUCLEAR PLANT HOSPITAL ASSISTANCE PLAN

MEMORIAL HOSPITAL
ST. JOSEPH, MICHIGAN

D. C. COOK NUCLEAR PLANT ASSISTANCE PLAN

Upon notification to initiate the Assistance Plan:

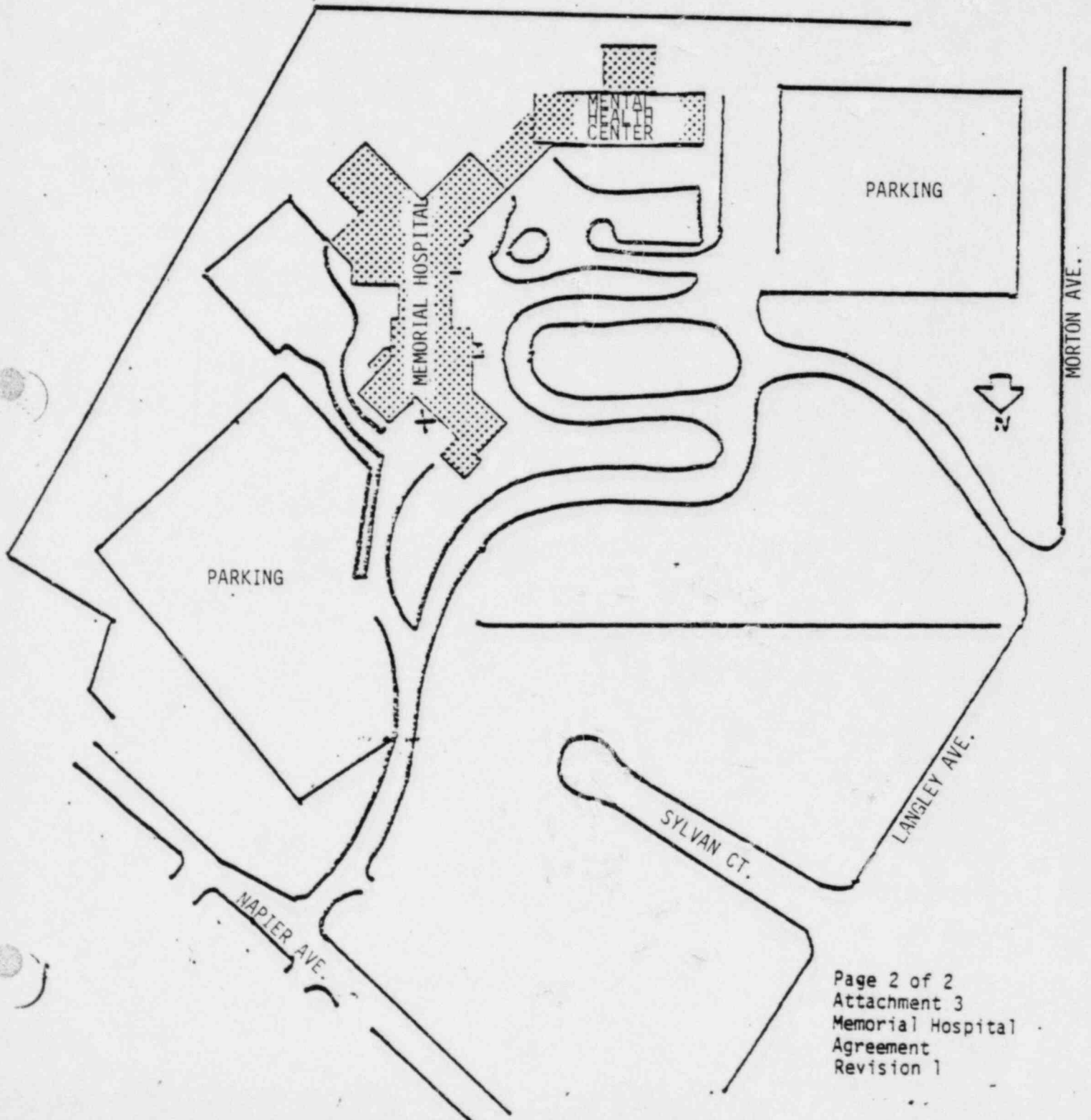
Notify the following departments that the Cook Nuclear Plant Hospital Assistance Plan is to be initiated:

Administration (off shifts and holidays, page the Administrative Nursing Supervisor)	Ext. 301
Laboratory	Ext. 311
Plant Operations (after 4:30 p.m. page the shift maintenance man)	Ext. 280
Housekeeping (4:30 p.m. to 11:00 p.m., page the housekeeping supervisor; 11:00 p.m. to 6:00 a.m., contact the executive housekeeper)	Ext. 282

D. C. COOK NUCLEAR PLANT HOSPITAL EMERGENCY PLAN

MEMORIAL HOSPITAL

St. Joseph, Michigan



D. C. COOK NUCLEAR PLANT HOSPITAL ASSISTANCE PLAN
MEMORIAL HOSPITAL ENGINEERING DEPARTMENT PROCEDURE

PART I

Upon notification by the House Supervisor, the Shift Maintenance Man shall carry out the following procedure:

1. Unlock the door to the Nuclear Contamination Control Supplies and remove the cart (A)* containing supplies.
2. Set up rope barrier, using stanchions and radiation rope (B). Hang "Radiation Marking Signs" (C) on rope barrier as shown on attached sketch.
3. Tape "Caution - Radiation" (C) sign over "MORGUE" plaque on Morgue entrance, using 2" duct tape (located in cart). Unlock Morgue door.
4. Lay out a path with yellow herculite (K) from inside of the Morgue (approximately 12" inside of doorway) to receiving dock, and down the ramp, as shown on attached sketch. Tape the herculite in place with duct tape. Herculite is marked with the letters AA BB and CC to identify it's proper location.
5. Block open the double acting doors at the receiving dock entrance with locking pins attached to bottom door pivots. Hook open the outside door on the receiving dock.
6. Secure ventilation supply to the Morgue and surrounding area. Verify that the ventilation exhaust remains in operation. Do not cover the exhaust grill.
7. Install metal cover (E) over sink in Morgue.
8. Tape over floor drain in Morgue using Radiation Tape (F).
9. Tape over drain in Autopsy Table, using Radiation Tape (F).
10. Attach hose and shower spray head to Autopsy Table Faucet.
11. Set 5 gallon plastic container (G) under exposed drain on Autopsy Table and remove plug from drain.
12. Tape large (23" x 36") plastic bags (H) to walls in Morgue for disposal of contaminated materials, as shown on sketch.
13. Put stretcher insert on Autopsy Table.
14. Remove all equipment from cabinet tops.
15. Don protective clothing (shoe covers, disposable lab coat, and yellow gloves). Station yourself on the receiving dock to insure unauthorized traffic (other than D. C. Cook Nuclear Plant ambulance personnel) do not enter the controlled area.
16. When clean transport cart is to be brought into Morgue, roll out brown craft paper (J) from outside the controlled area into the Morgue, then roll in cart.

*Letters refer to identifications on the attached figure.

D. C. COOK NUCLEAR PLANT HOSPITAL, ASSISTANCE PLAN
MEMORIAL HOSPITAL ENGINEERING DEPARTMENT PROCEDURE

PART II

After arrival of personnel and patient(s) from Cook Nuclear Plant, and patient(s) has been moved into the Morgue:

NOTE: If there are two patients, both shall be moved into the Morgue with the patient to be treated second to be stationed along one wall. If there are more than two patients, the remaining patients shall remain within the ambulance until they may be accommodated within the Morgue.

1. Roll up and remove yellow herculite (K)* pathway and place inside yellow trash bag(s).
2. Change gloves and shoe covers after removing herculite. Put on new pair of gloves and shoe covers before proceeding with Step 3.
3. Remain within the controlled area, and insure that non-essential personnel do not enter the area.
4. Assist the personnel within the controlled area as necessary. Do not leave the controlled area before being monitored and cleared by Cook Plant personnel.

NOTE: All supplies and items mentioned are located in the Contamination Control Supply Cart and Storage Room.

*Letters refer to identification on the attached figure.

PART II

After arrival of personnel and patient(s) from Cook Nuclear Plant, and patient(s) has been moved into the Morgue:

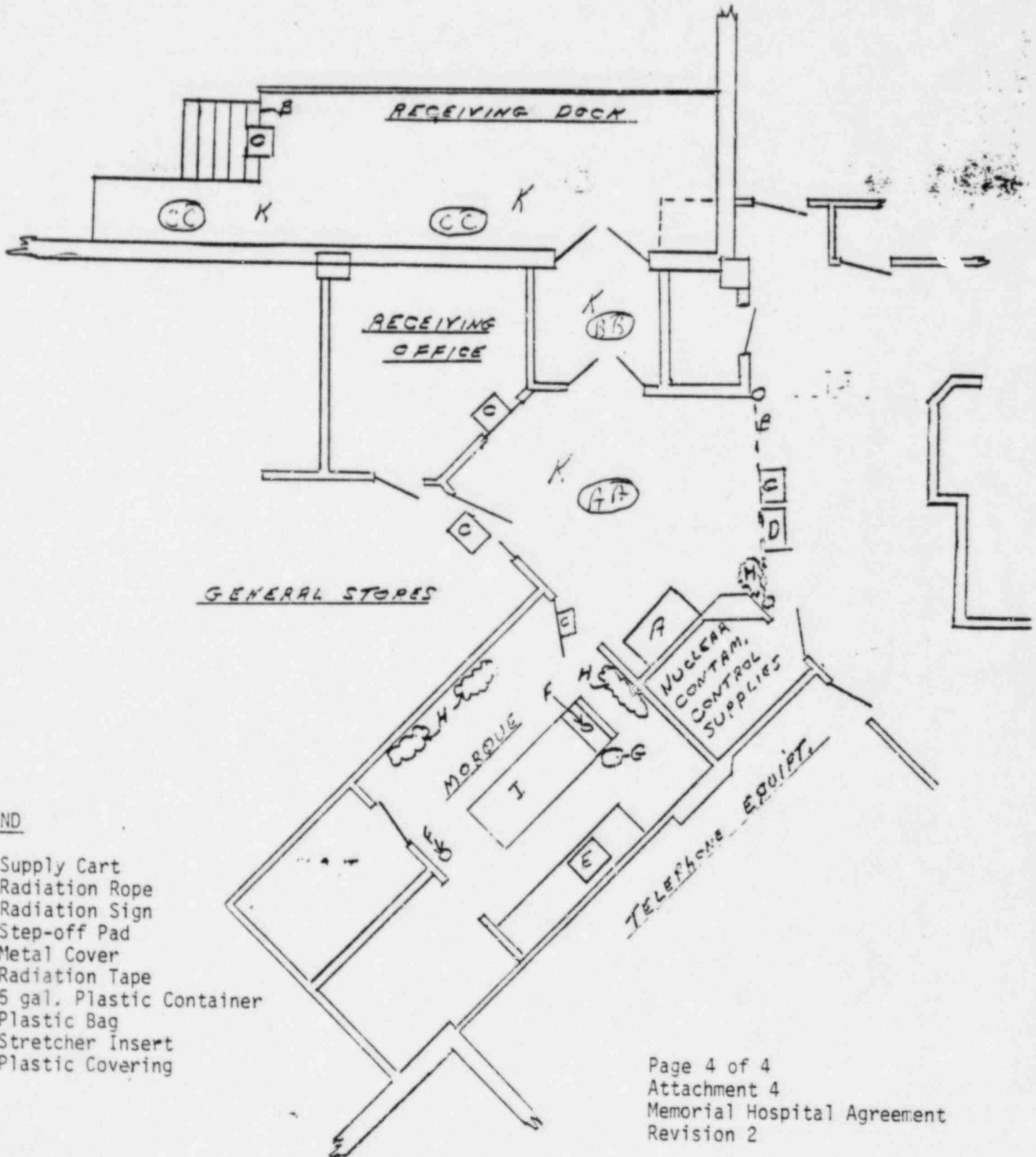
NOTE: If there are two patients, both shall be moved into the Morgue with the patient to be treated, second to be stationed along one wall. If there are more than two patients, the remaining patients shall remain within the ambulance until they may be accommodated within the Morgue.

1. Roll up and remove yellow herculite (K) pathway and place inside yellow trash bag(s).
2. Change gloves and shoe covers after removing herculite. Put on new pair of gloves and shoe covers before proceeding with Step 3.
3. Remain within the controlled area, and insure that non-essential personnel do not enter the area.
4. Assist the personnel within the controlled area as necessary. Do not leave the controlled area before being monitored and cleared by Cook Plant personnel.

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D. C. COOK NUCLEAR PLANT HOSPITAL ASSISTANCE PLAN



LEGEND

- "A" Supply Cart
- "B" Radiation Rope
- "C" Radiation Sign
- "D" Step-off Pad
- "E" Metal Cover
- "F" Radiation Tape
- "G" 5 gal. Plastic Container
- "H" Plastic Bag
- "I" Stretcher Insert
- "K" Plastic Covering

DONNING OF ANTI-CONTAMINATION CLOTHING

1. Put on one disposable gown.
2. Put on one yellow, plastic shoe cover on each foot.
3. Put on one pair of gloves.
4. Put on one plastic apron.
5. Second disposable gown should be donned, followed by second pair of yellow plastic shoe covers, plastic apron and gloves.
6. Put on surgeons cap and surgical mask.
7. Dosimetry will be issued by a Radiation Protection Technician upon arrival at the hospital.

REMOVAL OF ANTI-CONTAMINATION CLOTHING

1. Remove outer glove.
2. Remove surgical mask.
3. Remove yellow shoe covers.
4. Remove plastic apron.
5. Remove outer disposable gown.
6. Remove surgeons cap.
7. Put all material in appropriate yellow bag.

UPON LEAVING CONTAMINATED AREA

1. Remove gloves.
2. Remove dosimetry and place in clean area.
3. Remove disposable gown, remove one shoe cover, step onto step-off pad, then remove other shoe cover and step onto step-off pad.