INDIANA & MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT

PLANT MANAGER PROCEDURE

Index

Identification Number	Title	Revision No. And Date	Comments
PMP 2091 EPP.001	Emergency Telephone Communications	Rev. 1 6-24-82	
EPP.002	Barring of the PABX	Revision 1 6-29-82	
EPP.003	Follow-Up Off-Site Communications	Revision 0 4-1-81	TP-1,4-30-82 Exp NA
EPP.004	Protective Action Guides (PAGs) and Protective Actions	Revision 1 9-28-82	
EPP.005	Personnel Evacuation	Revision 1 5-25-82	
EPP.006	Activation of the Reentry and Rescue Team	Revision 1 9-28-82	
EPP.007	Security Actions During Emergency Conditions	Revision 1 5-5-82	
EPP.008	Emergency Medical Plan Guidelines	Revision 1 9-28-82	
EPP.009	Health Physics Procedures	Revision 1 9-29-82	
EPP.010	Activation of Radiation Monitoring Teams	Revision 0 4-1-81	
EPP.011	On-Site Radiological Monitoring	Revision 0 4-1-81	
EPP.012	Off-Site Radiological Monitoring	Revision 1 9-8-82	
EPP.013	Environmental Monitoring and Analysis	Revision 0 4-1-81	TP-1,2-25-82 Exp N/A

INDIANA & MICHIGAN
ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

PROCEDURE COVER SHEET

Procedure No. PMP 2081 EPP.004	
Revision No. 1	

TITLE PROTECTIVE ACTION GUIDES (PAGs) AND PROTECTIVE ACTIONS

SCOPE OF REVISION

Revision 1 - Change to agree with EPA recommendations in EPA 520/1-75-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents. Correct typing errors.

SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
PREPARED BY	J. P. Duffy	M. Grissman		
QUALITY ASSURANCE REVIEW				
INTERFACING DEPARTMENT HEAD CONCURRENCE	N.A.	Roland Regan		
DEPARTMENT HEAD APPROVAL	N.A.	N/A		
PLANT NUCLEAR SAFETY COMMITTEE	R S Keith	A. Blind		
PLANT MANAGER APPROVAL				
DATE OF ISSUE	3-31-81	9-28-82		

LIST OF EFFECTIVE PAGES

PAGE NUMBER		REVISION NUMBER AND DATE
Page 1 of 13		Revision 1, 9-28-82
Page 2 of 13		Revision 1, 9-28-82
Page 3 of 13		Revision 1, 9-28-82
Page 4 of 13	EXHIBIT A	Revision 1, 9-28-82
Page 5 of 13	EXHIBIT B	Revision 1, 9-28-82
Page 6 of 13	EXHIBIT C	Revision 1, 9-28-82
Page 7 of 13	EXHIBIT D	Revision 1, 9-28-82
Page 8 of 13	EXHIBIT E	Revision 1, 9-28-82
Page 9 of 13	EXHIBIT F	Revision 1, 9-28-82
Page 10 of 13	EXHIBIT G	Revision 1, 9-28-82
Page 11 of 13	EXHIBIT H	Revision 1, 9-28-82
Page 12 of 13	EXHIBIT I	Revision 1, 9-28-82
Page 13 of 13	EXHIBIT J	Revision 1, 9-28-82

INDIANA & MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

PROTECTIVE ACTION GUIDES (PAGS) AND PROTECTIVE ACTIONS

1.0 OBJECTIVES

The objective of this procedure is to provide the mechanism and criteria for recommending protective actions to both on and off-site personnel, including state and local governments. The procedure ensures safe, timely recommendation of protective actions when preset criteria (such as PAG's) are met or exceeded.

2.0 RESPONSIBILITIES

The Shift Supervisor (SS)/On-Site Emergency Coordinator (OSEC) are responsible for confirming the need for, and recommending protective actions to on-site and off-site personnel and agencies (per PMP 2080 EPP.001, .012, and PMP 2081 EPP.003).

The Radiation Assessment Director (RAD) is responsible for correlating projected and actual doses (both on-site personnel and the public) with Protective Actions Guides and protective actions, and to advise the SS/OSEC on which specific protective actions are recommended when these doses constitute Preventative Protective Action Guidelines or Emergency Protective Action Guidelines.

The Radiation Protection Director (RPD) is responsible for directing the Radiation Monitoring Teams to obtain and report the data required to assess radiological hazards and environmental effects of released radiation and, assisted by the Plant Evaluation Team, to assess those hazards and effects.

3.0 APPLICABILITY

This procedure is applicable anytime that an emergency is declared or at any other time the Shift Supervisor/On-Site Emergency Coordinator determines it is necessary.

4.0 INSTRUCTIONS

4.1 The Radiation Assessment Director (RAD) shall utilize Emergency and Preventative Protective Action Guidelines (PAG's) as follows:

4.1.1 To determine recommended protective actions for population and workers when given a projected dose to whole body or thyroid (in Rem), use Exhibit A, Recommended Protective Actions for Population and Workers. Recommend maximum exposure values for the population at risk to the SS/OSEC in accordance with this exhibit.

4.1.2 To relate emergency classification with radiological emergency action level at site boundary, use Exhibit B, Emergency Protective Action Guidelines.

4.1.3 If the radiological event involves an actual liquid release into Lake Michigan, which could possibly affect public health, refer to Exhibit C, Emergency Protective Action Guidelines for Liquid Releases to Lake Michigan.

4.1.4 To determine the necessity for respiratory protection equipment based on combined iodine and particulate concentrations (MPC), refer to Exhibit D, Guidance for Respiratory Protection.

4.1.5 For guidance in determining preventative or emergency protection actions to be used for food and agricultural products in the event of a radiological release, refer to the following exhibits:

4.1.5.1 Exhibit E, Protective Action Guidelines for Contaminated Human and Animal Foods and Livestock.

4.1.5.2 Exhibit F, Response Levels Equivalent to Preventative PAG's.

4.1.5.3 Exhibit G, Response Levels Equivalent to Emergency PAG's.

4.1.5.4 Exhibit H, Recommended Preventative PAG's for Food and Agricultural Products.

4.1.5.5 Exhibit I, Recommended Emergency PAG's for Food and Agricultural Products.

4.1.6 To determine habitability of on-site facilities by the public, refer to Exhibit J, Maximum Allowable Contamination Limits for On-Site Facilities Used by the Public.

RECOMMENDED PROTECTIVE ACTIONS FOR POPULATION AND WORKERS

Projected Dose (R)		Recommended Action(s) [a]	Comments [d]
To the Population			
Whole body	Less than 0.5	No planned protective action[b]. State may issue an advisory to seek shelter and wait further instructions. Monitor environmental radiation levels.	Previously recommended protective actions may be reconsidered or terminated.
Thyroid	Less than 5.0		
Whole body	0.5 to less than 5.0	Advise to seek shelter. Consider evacuation. Evacuate unless constraints make it impractical. Monitor environmental radiation levels. Control access.	If constraints exist, special consideration should be given for evacuation of children and pregnant women.
Thyroid	5.0 to less than 25.0		
Whole body	5 and above	Seek shelter within a two-mile radius and five miles downwind. Place cows within ten miles on stored feed.	Consider evacuation for children and pregnant women.
Thyroid	25 and above		
To Emergency Workers			
Whole body	25	Control exposure of emergency team members to these levels except for lifesaving missions. (Appropriate controls for emergency workers include time limitations, respirators, and stable iodine).	Although respirators and stable iodine should be used where effective to control dose to emergency team workers, thyroid dose may not be a limiting factor livesaving missions[c].
Thyroid body	125		
Whole body	75	Control exposure of emergency personnel performing lifesaving missions to this for level. (Control of time of exposure will be most effective).	

(a) These actions are recommended for planning purposes. Protective action decisions at the time of the incident must take existing conditions into consideration.
(b) At the time of the incident, officials may implement low-impact protective actions in keeping with the principle of maintaining radiation exposures as low as reasonably achievable.
(c) If one or more lives is likely to be saved, no upper limit for thyroid dose is established.
(d) For actions to be taken with foodstuffs and/or livestock, see Exhibit E.

EMERGENCY PROTECTIVE ACTION GUIDELINES

Emergency Classification		Radiological Emergency Action Level at Site Boundary
1)	Unusual Event	No radiological releases.
2)	Alert	2 mR in one hour.
3)	Site Emergency	50mR/hr whole body for 30 min. 250mR/hr thyroid for 30 min. or 500mR/hr whole body for 2 min. 2.5R/hr thyroid for 2 min. or 500mR whole body for 30 days. 2.5R thyroid for 30 days. or Containment reading of 1.03×10^6 R/hr.
4)	General Emergency	≥ 500mR in 2 hrs. to whole body ≥ 2.5R in 2 hrs. to thyroid or ≥ 5R in 30 days to whole body ≥ 25R in 30 days to thyroid or Containment reading of 10.4×10^6 R/hr

EMERGENCY PROTECTIVE ACTION GUIDELINES FOR LIQUID RELEASES TO LAKE MICHIGAN

Emergency Action Level

Minimum liquid effluent concentration

Class	From Single Isotope	From Mixture of Isotopes
Alert	Releases which exceed 10X Technical Specification limits.	
Site Emergency	$50XMPC_W$	50uCi/ml
General Emergency	$500XMPC_W$	500uCi/ml

NOTES:

1. A liquid concentration which equals or exceeds the standard listed will result in classification as the first class appearing in the table, which meets the incident conditions. The concentration may be averaged over 24 hours.

2. MPC_W is the maximum permissable concentration in water. For listing of these values for various radionuclides, and for further information on performing calculations with MPC_W's, see 10 CFR, Part 20, Appendix B.

3. For liquid releases below the alert level, but greater than Technical Specification limits, the level shall be reported as an "unusual event".

Cook Plant Action

1. If a release to the circulating water discharge is such that the concentration of radioactive material released exceeds the levels shown, the Michigan Department of Public Health, U.S. Coast Guard, Berrien County Sheriff, and the Michigan Department of State Police are notified by the Plant Manager or his alternate that such an incident has occurred and that sampling of the appropriate public water intakes (depending on Lake current) may be required to determine if protective action is required.

2. Activate the necessary functions of the TSC and EOF.

3. Assess and respond.

4. Notify off-site individuals in the plant vicinity to leave the area and not to use the Lake bathing facilities.

Off-Site Authority Action

1. General Emergency Condition:

   The state/county will restrict all water occupancy and use within ½ mile downstream. Monitor the contaminated water plume to determine if further restrictions are required. Restriction on public bathing within one mile will also be considered.

2. Site Emergency Conditions:

   Monitor the contaminated water plume to confirm predictions and determine if further action is required.

3. Alert Conditions:

   Monitor the contaminated water plume as required.

GUIDANCE FOR RESPIRATORY PROTECTION

Consider particulate and iodine separately in mixed airborne fields and select respiratory protection to meet the most restrictive case.

Combined Iodine and Particulate Concentrations/MPC	Recommended	Acceptable
Less than 1	Use respirator if other conditions warrant.	No respirator necessary
1 to 10	Use cartridge or cannister	Use respirator if other conditions
11 to 50	Use atmosphere supplying respirator	Use cartridge or cannister and log MPC-hr
Greater than 50	Use full-face atmosphere-supplying respirator and log MPC-hr.	Use atmosphere supplying respirator

*Logs will be kept to ensure that no individual exceed 40 MPC-hr/wk airborne exposure. An Airborne Sample Worksheet, 12 THP RAD.203-3, is to be filled out to determine if an individual is exposed to greater than 0.25 MPC airborne activity.

PROTECTIVE ACTION GUIDELINES FOR CONTAMINATED HUMAN AND ANIMAL FOODS AND LIVESTOCK

PROJECTED DOSE, R	RECOMMENDED ACTION FOR HUMAN & ANIMAL FOOD	RECOMMENDED ACTION FOR LIVESTOCK
Whole Body Less than 0.5 Thyroid Less than 1.5	DPH[1] and DA[2] will monitor food and milk as required.	None
0.5 ≤ Whole Body ≤ 5.0 1.5 ≤ Thyroid ≤ 15.0[3]	DPH and DA will divert, condemn or dispose of food and issue advisories regarding home-grown foods. Also see Exhibit H for preventative PAG's. Food and milk will be monitored by DPH and DA as required.	Protective actions will be instituted if deemed necessary. Also see Exhibit H.
Whole Body Greater than 5.0 Thyroid Greater than 15.0[4]	DPH and DA will divert, condemn, or dispose of food and issue advisories regarding home-grown foods. Also see Exhibits H and I.	Recommend placing milk animals within ten miles on stored feed. Also see Exhibits H and I.

(1) DPH: Michigan Department of Public Health
(2) DA: Michigan Department of Agriculture
(3) If using values from Exhibit F, follow these guidelines.
(4) If using values from Exhibit G, follow these guidelines.

RESPONSE LEVELS EQUIVALENT TO PREVENTATIVE PAG's

Infant (1) as critical segment of population	^{131}I (2)	^{137}Cs	^{90}Sr	^{89}Sr
Initial deposition (microcuries/meter^2)	0.14	1.7	0.34	6
Peak activity:				
Pasture (microcuries/kilogram) (3)	0.27	3.5	0.7	13
Milk (microcuries/liter)	0.012	0.34	0.007	0.13
Total intake (microcuries)	0.09	7	0.2	2.6

(1) Newborn infant is the critical segment of the population for iodine-131. For other radionuclides, "infant" refers to a child of less than 1 year of age.

(2) From fallout, iodine-131 is the only radioiodine of significance with respect to milk contamination beyond the first day. In case of a reactor accident, the cumulative intake of iodine-133 via milk is about 0.5 percent of iodine-131, assuming equivalent deposition.

(3) Fresh weight.

NOTE: Response levels equivalent to PAG's are those levels of various radionuclides whose activity corresponds to a particular dose level (in rem), associated with taking a particular protective action. Refer to Exhibits E and A for decision-making.

RESPONSE LEVEL EQUIVALENT TO EMERGENCY PAG's

	^{131}I		^{137}Cs		^{90}Sr		^{89}Sr	
	Infant[1]	Adult	Infant[2]	Adult[5]	Infant	Adult	Infant	Adult
Initial Deposition (microcuries/meter^2)	1.4	13	17	65	3.4	25	60	3,000
Peak Activity:								
Pasture[4,6] (microcuries/kilogram)	2.7	37	35	50	7	50	130	6,000
Milk[3] (microcuries/liter)	0.12	1.7	3.4	22	0.08			
	0.55	1.3	60					
Total intake	0.9	10	70	110	2	12	26	1,000

1. Newborn infant is the critical segment of the population for iodine-131.

2. "Infant" refers to child less than 1 year of age.

3. From fallout, iodine-131 is the only radioiodine of significance with respect to milk contamination beyond the first day. In case of a reactor accident the cumulative intake of iodine-133 via milk is about 0.5 percent of iodine-131 assuming equivalent deposition.

4. Fresh weight.

5. Response levels for the adult population for cesium-137 refer to the meat pathways.

6. Peak activity in meat, microcuries per kilogram.

NOTE: The response levels equivalent to the Emergency PAG are presented in both infants and adults to permit use of either level and thus assure a flexible approach to taking action in cases where exposure of the most critical portion of the population (infants and pregnant women) can be prevented.

RECOMMENDED PREVENTATIVE PAG's FOR FOOD AND AGRICULTURAL PRODUCTS

The following protective actions should be considered for implementation when the projected dose equals or exceeds the appropriate PAG response level shown in Exhibit E.

For Pasture - Remove lactating dairy cows from contaminated pasturage and substitute uncontaminated stored feed.

- Substitute uncontaminated water for contaminated water.

- The size of area over which milk must be controlled is much greater than the area evacuated to prevent inhalation exposures. Prepare for pasture or feed control in all directions from the plant out to 5 times the distance planned for evacuation, and in predominantly downwind directions for 50 to 100 miles. Controls over greater distances may be needed fi the wind persists in a single direction for a long period of time.

For Milk - Withhold contaminated milk from market to allow radioactive decay of short-lived radio-nuclides. This may be achieved by storage of frozen fresh milk, frozen concentrated milk or frozen concentrated milk products.

- Divert fluid milk for production of dry whole milk, nonfat dry milk, butter or evaporated milk.

- If pasture and feed control actions have been implemented (even if only partially), non-contaminated milk supplies may be made available at least for critical users.

For Fruits and Vegetables - Wash, brush, scrub or peel to remove surface contamination, or preserve by canning, freezing and dehydrating or storing to permit radioactive decay of short-lived radionuclides.

For Grains - Mill or polish.

For Other Food Products - Process to remove surface contamination.

For Meat and Meat Products - Consider on a case-by-case basis.

RECOMMENDED EMERGENCY PAG's FOR FOOD AND AGRICULTURAL PRODUCTS

Isolate food containing radioactivity to prevent its introduction into commerce. Determine whether condemnation or other disposition is appropriate. Before taking this action, consider the following:

- The availability of other possible protective actions discussed for preventative PAG.
- Relative proportion of the total diet by weight presented by the item in question.
- The importance of the particular food in nutrition.
- The availability of uncontaminated food or substitutes having the same nutritional properties.
- The relative contribution of other foods and other radionuclides to the total dose.
- The time and effort required to effect corrective action.

MAXIMUM ALLOWABLE CONTAMINATION LIMITS FOR ON-SITE FACILITIES USED BY THE PUBLIC

	Alpha (dpm/100cm^2)		Beta-Gamma (mR/hr)	Beta-Gamma (dmp/100cm^2) [1]
	Total	Removable	Total	Removable
Skin, Personal Clothing, and Items Directly Associated with the Human Body	500	N.D. [2]	0.1	N.D. [2]
Material or Facilities Not Directly Associated with the Human Body	2500 (max) 500	100	0.2	1000

(1) Measured at 1 cm from the surface
(2) N.D. - Not Detectable

INDIANA & MICHIGAN
ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

PROCEDURE COVER SHEET

Procedure No.	PMP 2081 EPP.006
Revision No.	1

TITLE ACTIVATION OF THE REENTRY AND RESCUE TEAM

SCOPE OF REVISION

Revision 1 - Correct titles, clarify applicability.

SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
PREPARED BY	J.P. DUFFY	J. Palmer		
QUALITY ASSURANCE REVIEW				
INTERFACING DEPARTMENT HEAD CONCURRENCE	N.A.			
DEPARTMENT HEAD APPROVAL	N.A.	N/A		
PLANT NUCLEAR SAFETY COMMITTEE				
PLANT MANAGER APPROVAL				
DATE OF ISSUE	3-31-81	9-28-82		

LIST OF EFFECTIVE PAGES

Page Number	Revision Number and Date
Page 1 of 6	Revision 1 - 9-28-82
Page 2 of 6	Revision 1 - 9-28-82
Page 3 of 6	Revision 0 - 4/1/81
Page 4 of 6	Revision 0 - 4/1/81
Page 5 of 6	Revision 0 - 4/1/81
Page 6 of 6	Revision 0 - 4/1/81

INDIANA AND MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

ACTIVATION OF THE REENTRY AND RESCUE TEAM

1.0 OBJECTIVES

This procedure specifies actions needed to activate the Reentry and Rescue Team (RRT) and provides the guidelines to be used for reentry and rescue operations. This includes capabilities for: reentry of radiologically contaminated site facilities for monitoring, decontamination, and repair; rescue of injured and trapped personnel; administering of first aid/emergency medical procedures; and support of other emergency teams which must gain access to contaminated or hazardous site facilities.

2.0 RESPONSIBILITIES

The Shift Supervisor (SS)/On-Site Emergency Coordinator (OSEC) is responsible for activating the Reentry and Rescue Team. | 1

The Radiation Protection Director (RPD) is responsible for assigning the Reentry and Rescue Team missions and assuring their successful accomplishment.

The Reentry and Rescue Team (RRT) is responsible for reentry (into contaminated areas, if conditions warrent), rescue and/or first aid, decontamination and for hospital liaison.

The Operational Staging Area (OSA) Manager is responsible for briefing the Reentry and Rescue Team on status of personnel accountability (per PMP 2081 EPP.021, (Activation and Operation of the Operations Staging Area and Personnel Accountability) after completing personnel accountability.

NOTE: AS AN EXCEPTION TO THE RESPONSIBILITIES SET FORTH ABOVE, THE CHEMICAL SUPERVISOR IS RESPONSIBLE FOR THE CONTROL AND SUPERVISION OF THE RRT FOR TOXIC GAS RELEASE EVENTS IN ACCORDANCE WITH PMP 2081 EPP.010, TOXIC GAS RELEASE GUIDELINES.

3.0 APPLICABILITY

This procedure shall be implemented as directed by the SS/OCEC upon evacuation of part or all of the plant and activation of the Operations Staging Area. | 1

4.0 INSTRUCTIONS #OPTIONAL CHECKLIST ENTRY PROVIDED

4.1 The RRT will assemble as directed by the SS/OSEC and ascertain that adequately trained personnel are available to conduct RRT tasks. | 1

4.2 The RPD will assign RRT Team Leaders as necessary.

#4.3 The RPD will coordinate with the OSA Manager and the SS/OSEC to determine requirements for an emergency reentry, search, rescue and/or first aid mission and equipment needs. | 1

#4.4 The RPD will assure the availability of supplies and equipment necessary to perform RRT tasks (refer to PMP 2082 EPP.007).

4.5 RPD will accomplish the following actions when directed by the SS/OSEC or OSA Manager to conduct an emergency reentry, search or rescue mission:

NOTE: REENTRY, SEARCH AND RESCUE MISSIONS ARE ASSIGNED TO THE RPD WHEN PERSONNEL ARE UNACCOUNTED FOR AND/OR MISSING AS A RESULT OF PERSONNEL ACCOUNTABILITY ACTIONS DESCRIBED IN PMP 2081 EPP.021, ACTIVATION AND OPERATION OF THE TECHNICAL SUPPORT CENTER AND PERSONNEL ACCOUNTABILITY. PRIORITIES FOR RRT ACTIVATION SHOULD GENERALLY AGREE WITH EXHIBIT B.

4.5.1 Determine radiation levels in the area and map the safest access routes into and search routes within the accident area.

4.5.2 Assure that all members of the RRT are properly equipped with protective clothing and requisite equipment.

#4.5.3 Brief RRT members on the mission, the proposed routes, stay times, rescue/evacuation procedures and the probable consequences of exposure using the Reentry and Rescue Team Mission Directive shown at EXHIBIT A.

4.5.4 Assure that the RRT follows predetermined search routes and searches for unaccountable or injured personnel in the areas specified.

CAUTION: THE RRT SHOULD NOT DEVIATE FROM THE PREDETERMINED ROUTE. IF THE MONITORED DOSE RATES OF STAY TIMES ENCOUNTERED DURING THE REENTRY EXCEED THE LIMITS SET FOR THE REENTRY OPERATION, RRT SHOULD IMMEDIATELY COMMUNICATE WITH THE SS/OSEC, RPD, OR RETURN TO THE AREA FROM WHICH DISPATCHED. | 1

#4.6 The RRT will:

4.6.1 Administer First Aid in accordance with PMP 2081 EPP.008, Radiation Emergency Medical Plan Guidelines, to any personnel injured in hazardous areas.

4.6.2 Perform evacuation actions as described in PMP 2081 EPP. 008 for personnel injured or trapped in hazardous areas.

4.6.3 If contamination of personnel in a hazardous area places them in immediate danger, move them to a safer area and perform decontamination in accordance with PMP 2081 EPP. 009, Health Physics Procedures.

4.6.4 Conduct any short term operations (for which team is qualified, e.g., closing isolation valves, removing obstructions from drains, venting areas) in the hazardous areas which may mitigate hazardous conditions or their effects and minimize damage or casualties and report actions to the RPD.

4.6.5 Prior to leaving a controlled or contaminated area, submit to monitoring and determine exposure received.

#4.6.6 Complete the Reentry and Rescue Team Mission Directive, EXHIBIT A.

4.6.7 Submit to personnel and equipment decontamination procedures as necessary.

#4.7 Report to RPD for debriefing and/or subsequent missions.

REENTRY AND RESCUE TEAM MISSION DIRECTIVE

TYPE MISSION: Reentry First Aid Rescue Decontamination

ASSIGNED TO: _____ TEAM LEADER: _____

DATE/TIME ASSIGNED: _____ / _____ AREA INVOLVED: _____
Date Time

MISSION DETAILS: _____

_____

_____

_____

_____

_____

RADIATION/DAMAGE CONDITIONS IF KNOWN: _____

_____

_____

RECEIPT ACKNOWLEDGED _____
Team Leader

TIME MISSION INITIATED: _____ RADIATION LEVELS ENCOUNTERED _____

TIME MISSION COMPLETED: _____ ACCUMULATED RADIATION DOSE _____

RESULTS OF MISSION: _____

_____

_____

INJURY/DAMAGE REPORT: _____

_____

_____

RADIATION PROTECTION DIRECTOR ACTIVATION PRIORITIES(1)

Priority	Task	EPP(s) That Implement
1	Search and Rescue and First Aid-Life Saving Only	PMP 2081 EPP.006
2	Initial Dose Projections and Comparison with EALs	PMP 2080 EPP.001, .006, .007
3	In-Plant Surveys to Calculate Initial Source Term	PMP 2081 EPP.011, .012, .014
4	Dose Confirmation (Off-site Monitoring)	PMP 2081 EPP.012
5	Monitoring at Access Control Points for Radiation/Contaminated Areas	PMP 2081 EPP.011
6	Emergency First Aid and Decontamination - not Life Saving	PMP 2081 EPP.008, .009
7	Accompany Follow-up Reentry and Rescue Teams	PMP 2081 EPP.010
8	Personnel Exposure Control (Routine Dosimetry Assurance and Completion of Radiation Work Permits)	PMP 2081 EPP.009
9	Follow-up Radiation Monitoring for Effects	PMP 2081 EPP.012, .013, .014, .015
10	Liaison with Off-site Agencies	PMP 2081 EPP.013
11	Follow-up Dose Projections and EAL Modifications	PMP 2081 EPP.012, .013, .014, .015
12	Follow-up In-plant/On-site Monitoring and Sample Collection	PMP 2081 EPP.011, .016
13	Sample Analysis and Interpretation	PMP 2081 EPP.016, .017
14	Minor First Aid Decontamination	PMP 2081 EPP.008, .009

(1) This list of activity priorities is sequenced in a "likely order" for a fast breaking radiological emergency when personnel resources may be limited. Personnel assignments should be made as needed by the specific plant and personnel requirements.

CHECKLIST FOR EPP.006

ACTIVATION OF THE REENTRY AND RESCUE TEAM

4.3	RPD coordinates with OSA Manager/OSEC:	_____ / _____	
		initials	date
4.4	RRT properly equipped:	_____ / _____	
		initials	date
4.5.3	RRT briefing conducted and directive issued:	_____ / _____	
		initials	date
4.6	Mission accomplished and records completed:	_____ / _____	
		initials	date
4.7	Debriefing completed:	_____ / _____	
		initials	date

INDIANA & MICHIGAN
ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

PROCEDURE COVER SHEET

Procedure No.	PMP 2081 EPP.008
Revision No.	1

TITLE EMERGENCY MEDICAL PLAN GUIDELINES

SCOPE OF REVISION

Revision 1 - Correct titles; include provisions for injuries when TSC/OSA are not activated; provide for issuance of necessary equipment to incoming ambulance crew.

SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
PREPARED BY	J.P. DUFFY			
QUALITY ASSURANCE REVIEW				
INTERFACING DEPARTMENT HEAD CONCURRENCE	N.A.			
DEPARTMENT HEAD APPROVAL	N.A.	N/A		
PLANT NUCLEAR SAFETY COMMITTEE				
PLANT MANAGER APPROVAL				
DATE OF ISSUE	3-31-81	9-28-82		

LIST OF EFFECTIVE PAGES

Page Numbers	Revision Number and Date
Page 1 of 13	Revision 1 -9-28-82
Page 2 of 13	Revision 1 -9-28-82
Page 3 of 13	Revision 0 - 4/1/81
Page 4 of 13	Revision 1 -9-28-82
Page 5 of 13	Revision 0 - 4/1/81
Page 6 of 13	Revision 0 - 4/1/81
Page 7 of 13 EXHIBIT A	Revision 1 -9-28-82
Page 8 of 13 EXHIBIT B	Revision 1 -9-28-82
Page 9 of 13 EXHIBIT C	Revision 0 - 4/1/81
Page 10 of 13 EXHIBIT D	Revision 0 - 4/1/81
Page 11 of 13 EXHIBIT E	Revision 0 - 4/1/81
Page 12 of 13 EXHIBIT F	Revision 0 - 4/1/81
Page 13 of 13 CHECKLIST	Revision 1 -9-28-82

INDIANA AND MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

RADIATION EMERGENCY MEDICAL PLAN GUIDELINES

1.0 OBJECTIVES

This procedure provides the guidelines to be used to protect injured personnel during emergency transfer, prevent the spread of radioactive contamination, protect the persons effecting the transfer, and protect personnel at the medical facility.

2.0 RESPONSIBILITIES

2.1 The Shift Supervisor (SS)/On-Site Emergency Coordinator (OSEC) is responsible for assuring the first aid, decontamination, evacuation and medical treatment of personnel injured during plant emergencies. | 1

2.2 If the Operations Staging Area has been activated, the Radiation Protection Director (RPD) is responsible for coordinating the activities of the Reentry and Rescue Team and to perform actions as directed by the SS/OSEC. | 1

2.3 If activated, the Reentry and Rescue Team (RRT) is responsible for performing the emergency medical care and decontamination activities set forth in this procedure. | 1

2.4 If paragraphs 2.2 and 2.3 are not applicable, an individual assigned by the SS (usually an Assistant Shift Supervisor [ASS]) will be responsible for coordinating the activities at the scene of the injury. He will be assisted by one or more individuals trained in first-aid as well as one or more individuals trained in Radiation Protection. | 1

NOTE: IN GENERAL, THE ORDER OF MEDICAL TREATMENT WILL BE:

1) CARE OF SEVERE PHYSICAL INJURIES.
2) FIRST AID TO OTHER INJURIES.
3) PERSONNEL DECONTAMINATION.
4) DEFINITIVE MEDICAL TREATMENT AND SUBSEQUENT THERAPY AS REQUIRED.

3.0 APPLICABILITY

This procedure is applicable on-site, during transfer from on-site treatment areas off-site, and at off-site medical facilities for any individuals injured in a radiation emergency. If the injury is not associated with any radiological conditions, procedure PMP 2080 EPP. | 1

014, Personnel Injury, should be used instead. The procedure assumes the activation of the Reentry and Rescue Team during an emergency condition. If no RRT is activated, the individual designated by the SS in paragraph 2.4 shall assure the responsibilities described for the RPD and the other individuals assigned to assist him shall fulfill the role specified for the RRT. | 1

4.0 INSTRUCTIONS #OPTIONAL CHECKLIST ENTRY PROVIDED

4.1 The Radiation Protection Director (RPD) shall:

#4.1.1 Determine (or estimate) the following data for overall assessment of necessary medical aid.

1) Number of injured personnel.
2) Nature and severity of injuries.
3) Locations of injured personnel.
4) Contamination levels and dose rates.
5) Number of RRT members on hand.

4.1.2 Notify the SS/OSEC of any outside assistance required. | 1

#4.1.3 Form RRTs as necessary from qualified personnel based on PMP 2081 EPP.010 - EXHIBIT B, RADIATION PROTECTION DIRECTOR ACTIVATION RESPONSIBILITIES, appoint a leader for each RRT formed, and document the formation and composition of the teams.

4.1.4 If hospitalization is required and radiological contamination is not involved, the RPD shall promptly notify the SS/OSEC and advise him of the need to notify Memorial Hospital of incoming patients.

#4.2 The SS/OSEC (or Emergency Communicator, as designated) shall make the following requests for emergency assistance:

4.2.1 Notify Security to request ambulance service. If contaminated patients are involved, request Security to also bring the plant ambulance to the Vehicle Search Portal for possible off-site agency use.

4.2.2 Notify Memorial Hospital for the following:

4.2.2.1 For patients not requiring decontamination, the SS/OSEC or Emergency Coordinator shall utilize EXHIBIT A, HOSPITAL CALL - INDUSTRIAL ACCIDENT, NO RADIOLOGICAL COMPLICATIONS. | 1

4.2.2.2 For contaminated patients, the SS/OSEC or Emergency Coordinator (EC) shall utilize EXHIBIT B, HOSPITAL CALL - RADIOLOGICAL HAZARDS. | 1

4.3 RRT members in the field shall perform the following actions:

4.3.1 Determine (or estimate) and report the following assessment of necessary medical aid to the RPD:

1) Number of injured personnel.
2) Nature and severity of injuries.
3) Locations of injured personnel.
4) Contamination levels and dose rates.
5) Any special medical needs.
6) Injured persons names (if known).
7) Cause of injuries.

#4.3.2 Administer life-saving first aid and treatment of severe injuries, e.g., trauma and shock, hemorrhage, etc.. Such actions shall take precedence over decontamination procedures.

NOTE: SEE EXHIBIT C, FIRST AID GUIDELINES, FOR BASIC TREATMENT REQUIREMENTS AND PRIORITIES.

#4.3.3 Contact RPD to request transportation for patients requiring immediate hospitalization, communicating any special treatments patients may require enroute or upon arrival.

4.3.4 If injury occurs within an actual or potential radioactive contaminated area, the RRT shall:

4.3.4.1 Perform life saving and first aid activities as necessary to move patient.

4.3.4.2 Form a stretcher team if injured is unconscious or immobilized.

4.3.4.3 Remain with injured person until stretcher team arrives.

4.3.4.4 Evacuate injured from contaminated area to clean boundary for first aid and decontamination as injuries permit.

4.3.4.5 Continue to administer first aid as appropriate.

4.3.4.6 Remove protective clothing from injured person as injury permits.

4.3.4.7 Transport injured by stretcher to an area where contamination survey can be performed utilizing procedures described in paragraph 3.3.6.

4.3.5 RRT will move patients as follows:

4.3.5.1 Spread an open blanket or sheet over the stretcher.

4.3.5.2 Place the patient on top of blanket or sheet and wrap the patient in the blanket or sheet.

4.3.5.3 Transport the patient to a clean boundary area designated by RPD.

4.3.5.4 If applicable, inform the RPD when the patient is ready to be transported by ambulance.

#4.3.6 If injury requires hospitalization and radiological contamination is involved, notify the RPD and advise him of the need to notify Memorial Hospital of incoming patients with radiological contamination.

4.3.7 Upon arrival of the ambulance, report the extent of patient's injuries, first aid measures, radiation status, and current condition to ambulance attendants.

NOTE: THE AMBULANCE CREW SHOULD HAVE EACH RECEIVED FROM A SECURITY GUARD A PACKET CONTAINING ANTI-CONTAMINATION CLOTHING AND DOSIMETRY UPON ENTERING PAST THE MAIN GUARD HOUSE (POST 2). 1

#4.3.8 Determine from the ambulance attendants if patient is to be transported in his current condition or receive decontamination and be transferred to another stretcher.

4.3.9 Complete a PATIENT RADIATION AND MEDICAL STATUS TAG, EXHIBIT D.

4.3.10 Contain any residual contamination that may exist on the patient by the use of blankets, sheets, etc.

4.3.11 Protect the interior of the ambulance from further contamination from either the patient or stretcher by using blankets or sheets.

NOTE: A COPY OF THE DCCNP AGREEMENT WITH MEMORIAL HOSPITAL IS INCLUDED IN APPENDIX B.

#4.3.12 Accompany the patient to the hospital facility, continue treatment, perform surveys as necessary, and perform the following actions:

NOTE: ONLY ONE INDIVIDUAL APPOINTED BY THE RPD SHOULD ACCOMPANY THE AMBULANCE TO THE HOSPITAL.

4.3.12.1 Direct the ambulance/transportation driver to the receiving dock at the rear of Memorial Hospital.

NOTE: SEE EXHIBIT E, MAP OF MEMORIAL HOSPITAL AREA; AND EXHIBIT F, MAP OF MEMORIAL HOSPITAL MORGUE AREA.

4.3.12.2 Inform the attending physician of the patient's medical and radiological status and any radiologigal hazards that may be encountered.

4.3.12.3 Ensure that all personnel present in the Treatment Room (Morgue) are properly dressed in Anti-C's and wearing dosimetry (TLDs, dosimeters).

4.3.12.4 Ensure that a control point outside the treatment room (morgue) has been established and the controlled area is adequately protected and/or guarded.

4.3.12.5 Provide recommendations and assistance to the attending physician, upon request, with regard to the contamination of the patient and other radiological hazards.

4.3.12.6 Monitor all tissue specimens for residual contamination.

4.3.12.7 Monitor the patient periodically and inform the physician of the success/failure of any decontamination performed.

4.3.12.8 Supervise and regulate personnel moving into or leaving the contaminated area.

4.3.12.9 Maintain control of all equipment going into or coming from the contaminated area.

NOTE: WHEN THE PATIENT(S) HAS BEEN ADEQUATELY TREATED, DECONTAMIANTED AND REMOVED FROM THE TREATMENT ROOM, PERFORM THE FOLLOWING ACCOUNTABILITY AND DECONTAMINATION ACTIONS:

4.3.12.10 Collect dosimetry and complete records.

4.3.12.11 Collect any and all contaminated materials and wastes and arrange for packaging and return to the plant for laundering and/or disposal.

4.3.12.12 Seal and mark contaminated items from the morgue as "Radiation - Contaminated" and dispose of per DCCNP HP procedures.

4.3.12.13 Inventory all emergency kits used at the medical facility and make arrangements for replacement of used or missing items.

4.3.12.14 Return all dosimetry devices and applicable records concerning injuries and exposures to the RPD.

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:"

Patient#	Injury
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:

(from 7:30 AM to 3:00 PM, Monday through Friday) - the Assistant Director, Emergency Room and Outpatient;

(from 3:00 PM to 7:30 AM, Monday through Friday and on Weekends) - the Emergency Room Charge Nurse."

When the Assistant Director or 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#	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 R.P.)."
   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. ____ (Others as given by R.P.)
8. "Are there any questions?"

At the conclusion of the report, the Assistant Director or Charge Nurse will telephone the Shift Supervisor at the Donald C. Cook Nuclear Plant to confirm the report.

FIRST AID GUIDELINES

First aid shall be administered using the following guidelines:

I. Check vital signs and assess injuries.

II. Categorize patients into the following priorities for treatment:

A. Major injuries, but can be saved
B. Minor injuries requiring minimal care

III. Priorities of Injuries and Treatments:

A. Unconscious

1. Check airway and pulse
2. Begin CPR, if necessary
3. Keep warm
4. Decontaminate

B. Shock

1. Keep warm
2. Keep flat
3. Administer sips of water, if conscious
4. Decontaminate

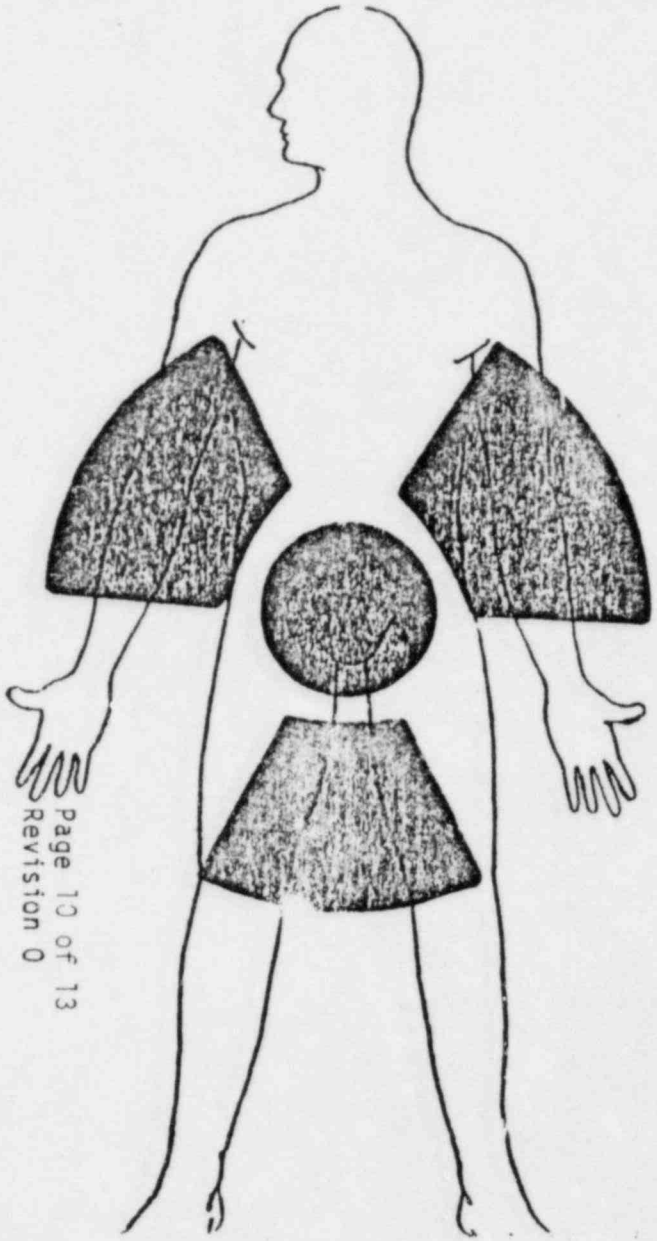
C. Bleeding (arterial or veinous origin)

1. Apply direct pressure
2. Decontaminate

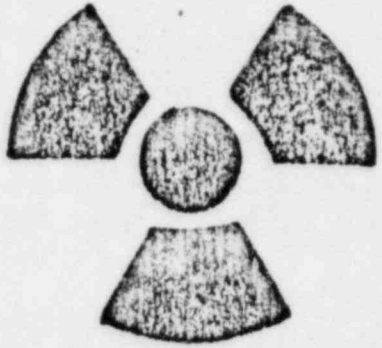
D. Fractures

1. Splint
2. Cover compound wounds
3. Decontaminate

CONTAMINATION HAZARD
RADIATION HAZARD
(Cross out above warning if not applicable)



(Indicate injuries and radiation and contamination levels on drawing)



CAUTION

THIS PERSON IS A

CONTAMINATION HAZARD
RADIATION HAZARD

(Cross out above warning if not applicable)

Name_____

Maximum Contamination Level____ dpm/100cm^2

Maximum Radiation Level_____ mr/Hour

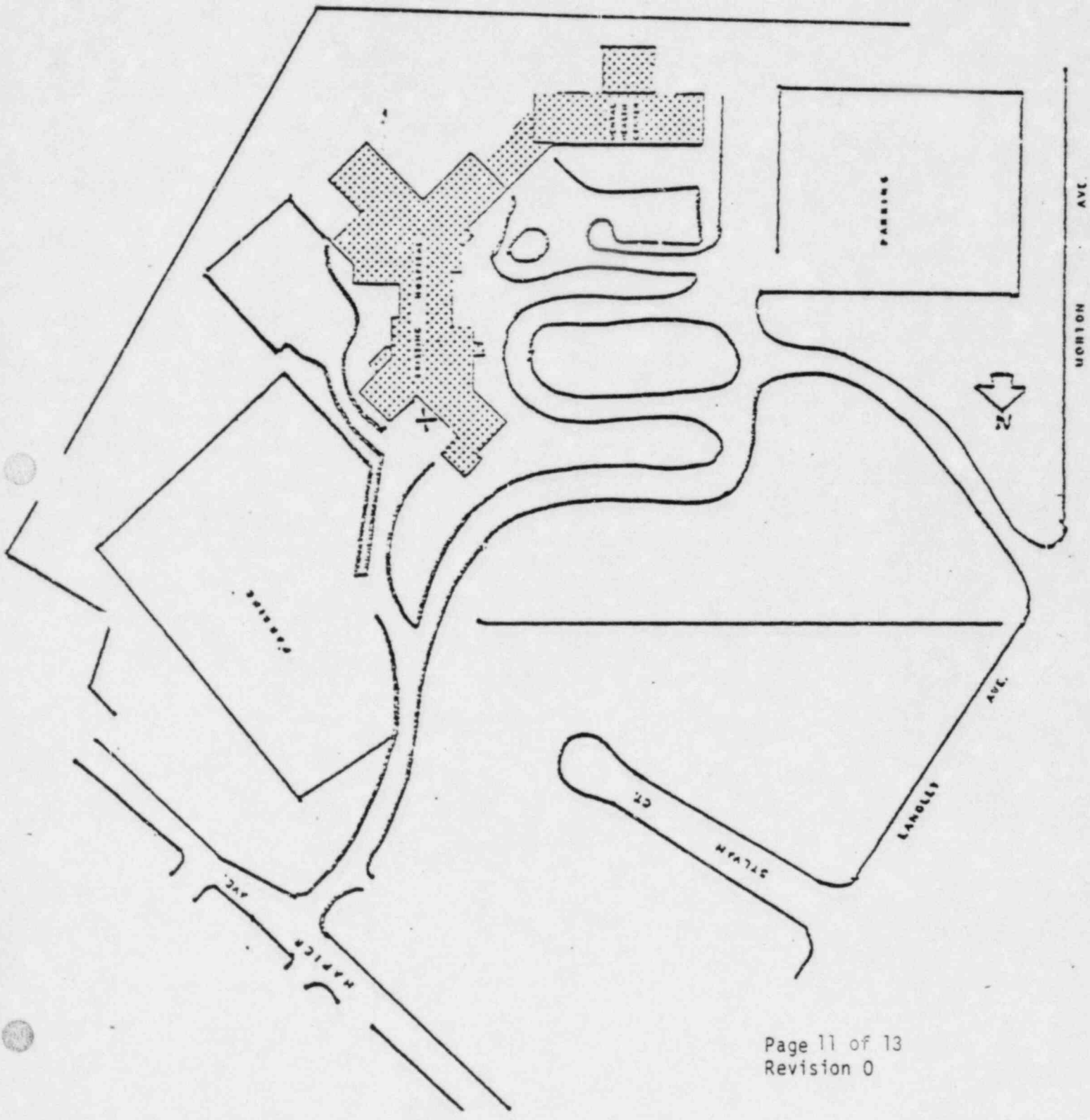
Date_____ Time_____

Surveyed by_____

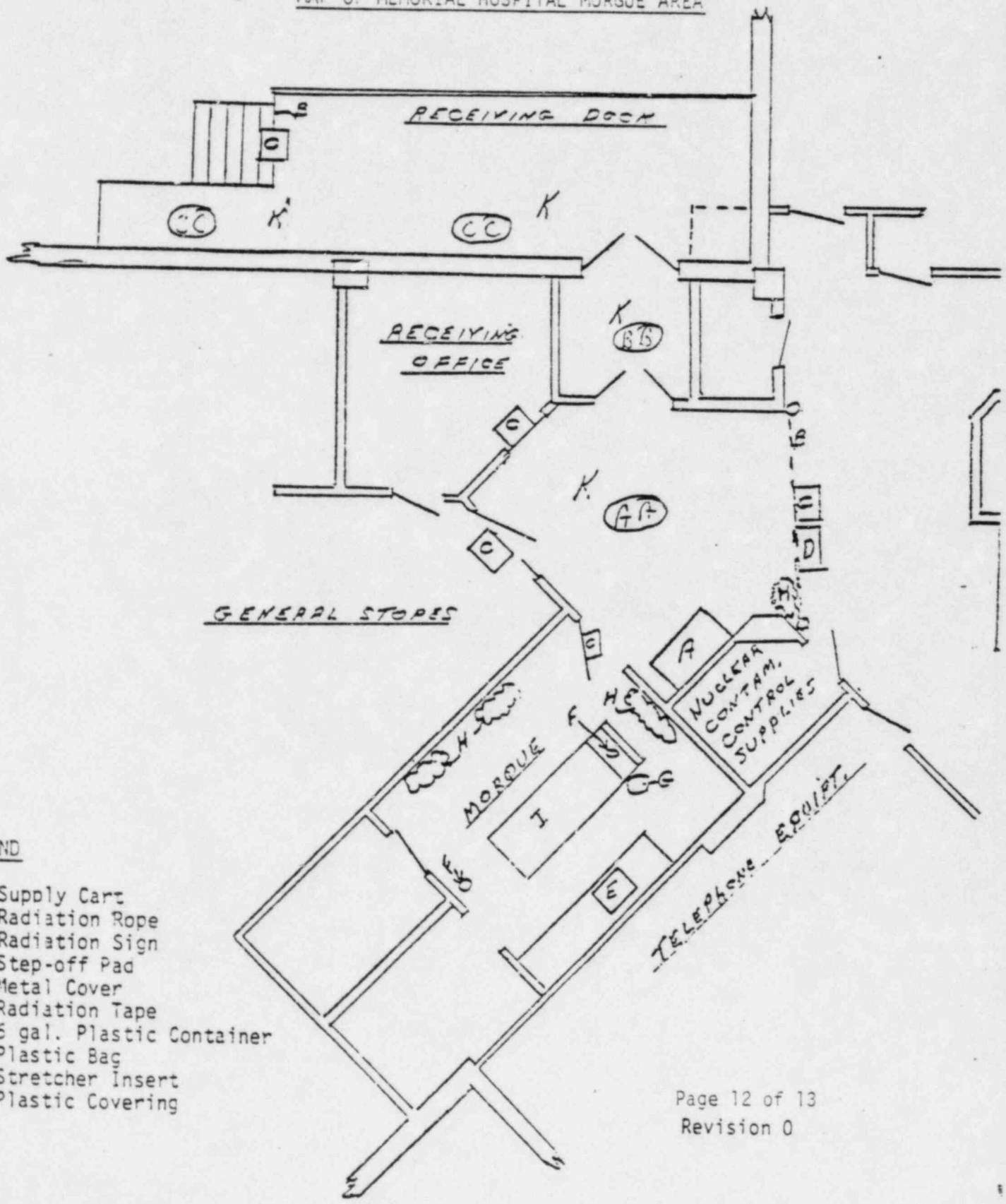
PATIENT RADIATION AND MEDICAL STATUS TAG

PMP 2081 EPP.008
EXHIBIT D

MAP OF MEMORIAL HOSPITAL AREA



MAP OF MEMORIAL HOSPITAL MORGUE AREA



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

CHECKLIST FOR EPP .008

EMERGENCY MEDICAL CARE

4.1.1	Conduct initial assessment (RPD)	_____/_____ initials time
4.1.3	Form RRT and document (below)	_____/_____ initials time
4.2 & 4.3.6	Notification to Memorial Hospital and/or ambulance services (SS/OSEC)	_____/_____ initials time
4.3.2	Administer first aid (RRT)	_____/_____ initials time
4.3.3	Obtain emergency ambulance transportation	_____/_____ initials time
4.3.8	Prepare for transportation of the patient to the hospital	_____/_____ initials time
4.3.12	Accompany patient to hospital, continue first aid and operate survey meters	_____/_____ initials time

INDIANA & MICHIGAN
ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

PROCEDURE COVER SHEET

Procedure No.PMP 2081 EPP.009
Revision No. 1

TITLE HEALTH PHYSICS PROCEDURES

SCOPE OF REVISION

Revision 1 - Correct titles, add instructions for setting up OSA and Control Room control points.

SIGNATURES

	REV. 1	REV. 2	REV. 3	REV. 4
PREPARED BY				
QUALITY ASSURANCE REVIEW				
INTERFACING DEPARTMENT HEAD CONCURRENCE				
DEPARTMENT HEAD APPROVAL	N/A			
PLANT NUCLEAR SAFETY COMMITTEE				
PLANT MANAGER APPROVAL				
DATE OF ISSUE	9-28-82			

Form No. PMI 2010-1 - REV. 2

INDIANA & MICHIGAN
ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

PROCEDURE COVER SHEET

Procedure No.	PMP 2081 EPP.009
Revision No.	0

TITLE HEALTH PHYSICS PROCEDURES

SCOPE OF REVISION

SIGNATURES

	ORIGINAL	Rev. 1	REV. 2	Rev. 3
PREPARED BY	E. P. DUFFY			
QUALITY ASSURANCE REVIEW				
INTERFACING DEPARTMENT HEAD CONCURRENCE	N.A.			
DEPARTMENT HEAD APPROVAL	N.A.			
PLANT NUCLEAR SAFETY COMMITTEE				
PLANT MANAGER APPROVAL				
DATE OF ISSUE	3-31-81			

LIST OF EFFECTIVE PAGES

PAGE NUMBER	REVISION NUMBER AND DATE
Page 1 of 14	Revision 1, 9-28-82
Page 2 of 14	Revision 1, 9-28-82
Page 3 of 14	Revision 0, 04-01-81
Page 4 of 14	Revision 0, 04-01-81
Page 5 of 14	Revision 0, 04-01-81
Page 6 of 14	Revision 1, 9-28-82
Page 7 of 14 (EXHIBIT A)	Revision 0, 04-01-81
Page 8 of 14 (EXHIBIT B)	Revision 0, 04-01-81
Page 9 of 14 (EXHIBIT C)	Revision 0, 04-01-81
Page 10 of 14 (EXHIBIT D)	Revision 1, 9-28-82
Page 11 of 14 (EXHIBIT E)	Revision 1, 9-28-82
Page 12 of 14 (EXHIBIT E)	Revision 1, 9-28-82
Page 13 of 14 (EXHIBIT E)	Revision 1, 9-28-82
Page 14 of 14 (EXHIBIT E)	Revision 1, 9-28-82

INDIANA & MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT

HEALTH PHYSICS PROCEDURES

1.0 OBJECTIVES

This procedure sets forth those activities required to minimize contamination of personnel, to assure optimal protection for excessive radiation exposure, to accurately record personnel exposures and to accomplish decontamination procedures. This procedure is implemented following declaration of an Alert, Site Emergency, or General Emergency.

2.0 RESPONSIBILITIES

The Shift Supervisor (SS)/On-Site Emergency Coordinator (OSEC) is responsible for activating the Reentry and Rescue Team (RRT) as required. The Radiation Protection Director (RPD) is responsible for directing and controlling the RRT. |1

The Reentry and Rescue Team (RRT) is responsible for: assuring exposure of emergency personnel is minimized; establishing increased frequency of contamination surveys per 12-THP 6010.RAD.202; setting contamination limits; administering radiation work permits per 12-THP 6010.RAD.406; informing personnel entering a known or potential radiation area of possible health effects per PMP 2082.EPP.001; issuing dosimeters and for developing and maintaining accurate dosimetry records; and decontamination procedures.

The Emergency Security Team (EST) is responsible for providing enforcement support in controlling the provisions of this procedure.

3.0 INSTRUCTIONS #OPTIONAL CHECKLIST ENTRY PROVIDED

3.1 Initial Actions

#3.1.1 The RPD shall ensure the establishment and manning of a dosimetry issue area in the Operations Staging Area (or where designated by the SS/OSEC) which contains a supply of TLD's, self-reading pocket dosimeters, Exposure Record Sheets as shown in EXHIBIT A and pencils and/or pens. |1

#3.1.2 Ensure the establishment of a "Controlled Area" at the operation staging area and at unit one control room entrance as per EXHIBIT E, as deemed necessary by SS/OSEC. Ensure the establishment and manning of decontamination facilities.

3.2 The RRT shall:

#3.2.1 Issue special dosimetry (e.g., high range dosimeters or finger badges) as directed by the RPD.

3.2.2 Record dosimeter numbers and to whom issued.

NOTE: SEE EXHIBIT B, SPECIAL DOSIMETRY LOG.

3.2.3 Collect specimens and perform a bioassay or whole body count for personnel suspected of having internal contamination using the following guidelines:

3.2.3.1 Contamination present in the hair and face.

3.2.3.2 Respirator filters show contamination greater than 100mR/hr.

3.2.3.3 Indication of risk situations such as defeated respirator or retrospective recognition of airborne hazard.

3.2.4 Complete personnel dosimetry forms for all incoming personnel.

3.2.5 Brief volunteers and emergency personnel entering high radiation areas in accordance with PMP 2082.EPP.001, EMERGENCY EXPOSURE GUIDELINES.

3.2.6 Select radiation monitoring instrumentation to be used in surveys that is appropriate for the suspected exposure/dose rate range to be monitored.

3.2.7 Ensure the operability of the radiation monitoring instrument and that an adequate power supply is available.

3.2.8 Enter the area of unknow radiation levels with instrument on highest scale and work down to working level.

-CAUTION-

IF METER IS OFF SCALE ON INSTRUMENT'S HIGHEST SCALE OR IF A SURVEY INSTRUMENT MALFUNCTIONS WHILE IN A HIGH RADIATION AREA, LEAVE THE AREA IMMEDIATELY (REGARDLESS OF PREVIOUS READING).

#3.2.9 Determine the need for respiratory protection prior to any personnel entering a potentially high airborne radiation area by taking readings at the elevation and locations where breathing will occur.

NOTE: SEE EXHIBIT C, GUIDANCE FOR RESPIRATORY PROTECTION, CONSIDER PARTICULATE AND IODINE SEPARATELY IN MIXED AIRBORNE FIELDS.

3.2.10 Require all personnel entering the area to wear the proper respiratory protection and keep records if any of the conditions listed below are met or exceeded.

3.2.10.1 High airborne concentrations of radioactivity are suspected but not verified by monitoring.

3.2.10.2 Unidentified airborne radioactivity exceeds 3 x 10^{-9} uCi/cc.

3.2.10.3 Identified airborne radioactivity exceeds MPC using the relationship sum of concentrations C iodine/MPC iodine.

3.2.10.4 Alpha contamination exceeds 100 dpm/100 cm^2.

3.2.10.5 An unevaluated airborne radioactivity alarm is received from a fixed or portable airborne activity monitor.

3.2.10.6 Additional criteria of 12-THP 6010.RAD.203 are met.

3.2.11 Treat injured personnel in accordance with PMP 2081.EPP.008, EMERGENCY MEDICAL PLAN GUIDELINES and the procedures described below.

#3.3 RRT will treat contaminated uninjured personnel as follows:

3.3.1 Escort all personnel requiring decontamination and not requiring first aid to the nearest available decontamination facility including:

3.3.1.1 The Access Control Facility on the 609' elevation of the Auxiliary Building (unless area is contaminated).

3.3.1.2 The Operations Staging Area.

3.3.1.3 Alternate plant areas designated by the OSEC, RPD, or RRTL.

3.3.2 Remove loose clothing from contaminated personnel (shirt, trousers, shoes, etc.).

3.3.3 Apply masking tape by pressing tape lightly to contaminated areas of skin and hands to remove loose dry contamination.

NOTE: THIS METHOD CANNOT BE USED IF PERSONS HAVE LARGE QUANTITIES OF HAIR OVER CONTAMINATED AREA.

3.3.4 Wash contaminated areas with soap and warm water. Cover contaminated area with good lather, wash 2 or 3 minutes and rinse thoroughly. Monitor for residual contamination.

3.3.5 If contamination persists, repeat washing procedures up to 2 times, monitoring after each washing.

3.3.6 If contamination persists, refer to DCCNP 12-THP 6010.RAD.601 for further instructions.

#3.4 RRT will treat contaminated injured personnel as follows:

3.4.1 Assess all personnel injuries and administer life saving and first aid procedures, as necessary.

NOTE: FIRST AID ALWAYS TAKES PRECEDENCE OVER DECONTAMINATION PROCEDURES AND TREATMENT OF POSSIBLE SYMPTOMS FROM IRRADIATION.

3.4.2 Implement steps below based upon the specific class of injury:

3.4.2.1 Minor injuries with contamination

1) Attempt decontamination by removing all loose contaminated clothing and washing contaminated body surfaces with soap and water. Refer to DCCNP 12-THP 6010.RAD.601 for additional standard practices.

2) If decontamination is successful, transport personnel to First Aid Room for further medical treatment.

3) If decontamination is unsuccessful, notify the RPD.

3.4.2.2 Serious injuries with contamination

Refer to PMP 2081.EPP.008.

#3.5 All personnel entering a radiation area shall comply with the following procedures:

3.5.1 Personnel will obtain and complete a Radiation Work Permit (RWP).

3.5.2 Additional dosimetry shall be required and exceptions to the RWP procedure shall be made as follows:

3.5.2.1 A high range dosimeter shall be required for all entry personnel when:

1) Entering a radiation field greater than 5 R/hr.

2) Entering a radiation field of unknown intensity.

3.5.2.2 Finger badges shall be required for all entry personnel when:

1) Handling radioactive material where expected extremity dose rate greater than 100 R/hr.

2) Working on pipes or equipment where expected extremity dose rate greater than 24 R/hr.

NOTE: WHEN EXPOSURE OF PERSONNEL IS EXPECTED TO EXCEED THE LIMITS SET FORTH IN 10 CFR 20 (1.25 Rem/QTR), AUTHORIZATION OF THE RWP MUST BE MADE BY THE SS/OSEC. 1

The SS/OSEC may waive requirements for a RWP, or portions thereof, before entering a radiation area and give their authorization verbally.

NOTE: MEMBERS OF THE EMERGENCY SECURITY TEAM SUPPORT THE RPD AND RRT BY PERFORMING THE FOLLOWING ACTIONS:

1) Provide escorts for all non-badged personnel entering the site as approved by the SS/OSEC. 1

2) Escort all personnel to the Operations Staging Area and ensure that they obtain proper dosimetry before entering the protected area.

EXPOSURE RECORD SHEET

DATE	NAME AND ADDRESS	SOCIAL SECURITY NUMBER	AFFILIATION	DOSIMETER SERIAL NUMBER	INITIAL READINGS	FINAL READING	NET EXPOSURE	TLD NUMBER	ASSIGNED TLD RESULTS

SPECIAL DOSIMETRY LOG

Name	Dosimeter Type	Dosimeter Number

GUIDANCE FOR RESPIRATORY PROTECTION*

Consider particulate and iodine separately in mixed airborne fields and select respiratory protection to meet th most restrictive case. Table 6.9.1 of the Technical Specifications shall also be used as a guide.

Combined Iodine and Particulate Concentrations/MPC	Recommended	Acceptable
Less than 1	Use respirator if other conditions warrant.	No respirator necessary
1 to 10	Use cartridge or cannister	Use respirator if other conditions
11 to 50	Use atmosphere-supplying respirator	Use cartridge or cannister and log MPC-hr
Greater than 50	Use full-face atmosphere-supplying respirator and log MPC-hr	Use atmosphere supplying respirator

*Logs will be kept to ensure that no individual exceeds 40 MPC-hr/wk airborne exposure. An Airborne Sample Worksheet, 12-THP RAD.203-3, is to be filled out to determine if an individual is exposed to greater than 0.25 MPC airborne activity.

CHECKLIST FOR PMP 2081.EPP.009

HEALTH PHYSICS PROCEDURES

3.1.1	Establish dosimetry area:	_____/_____ initials date
3.1.2	Establish decontamination facilities and controlled areas:	_____/_____ initials date
3.2.1	Issue special dosimetry	_____/_____ initials date
3.2.9	Evaluate need for respirators	_____/_____ initials date
3.3/3.4	Conduct Decontamination Activities	_____/_____ initials date
3.5	Personnel Protection:	_____/_____ initials date

OSA SET-UP NORTH

1) Set-up two stations; place them far enough apart so a step off pad can be placed there if necessary.

2) Connect radiation ribbon from one station to the west wall and from station to the east wall.

3) Hang "Controlled Area" sign on each side of the barrier.

4) Place frisker on north side of the barrier.

5) If necessary, put step off pad in place between stations. Also set up a radiation waste poly bag.

OSA SET-UP SOUTH

1) Set-up one station on the north side of the elevator. Leave enough room between station and east wall so a step off pad can be placed there if necessary.

2) Connect radiation ribbon between station and the west wall.

3) Hang a "Controlled Area" sign on the radiation ribbon.

4) Place frisker on south end of the barrier.

5) If necessary, put step off pad in place between station and east wall. Also set up a radiation waste poly bag.

UNIT 1 CONTROL ROOM SET-UP

1) Set-up two stations; place them far enough apart so a step off pad can be placed there if necessary.

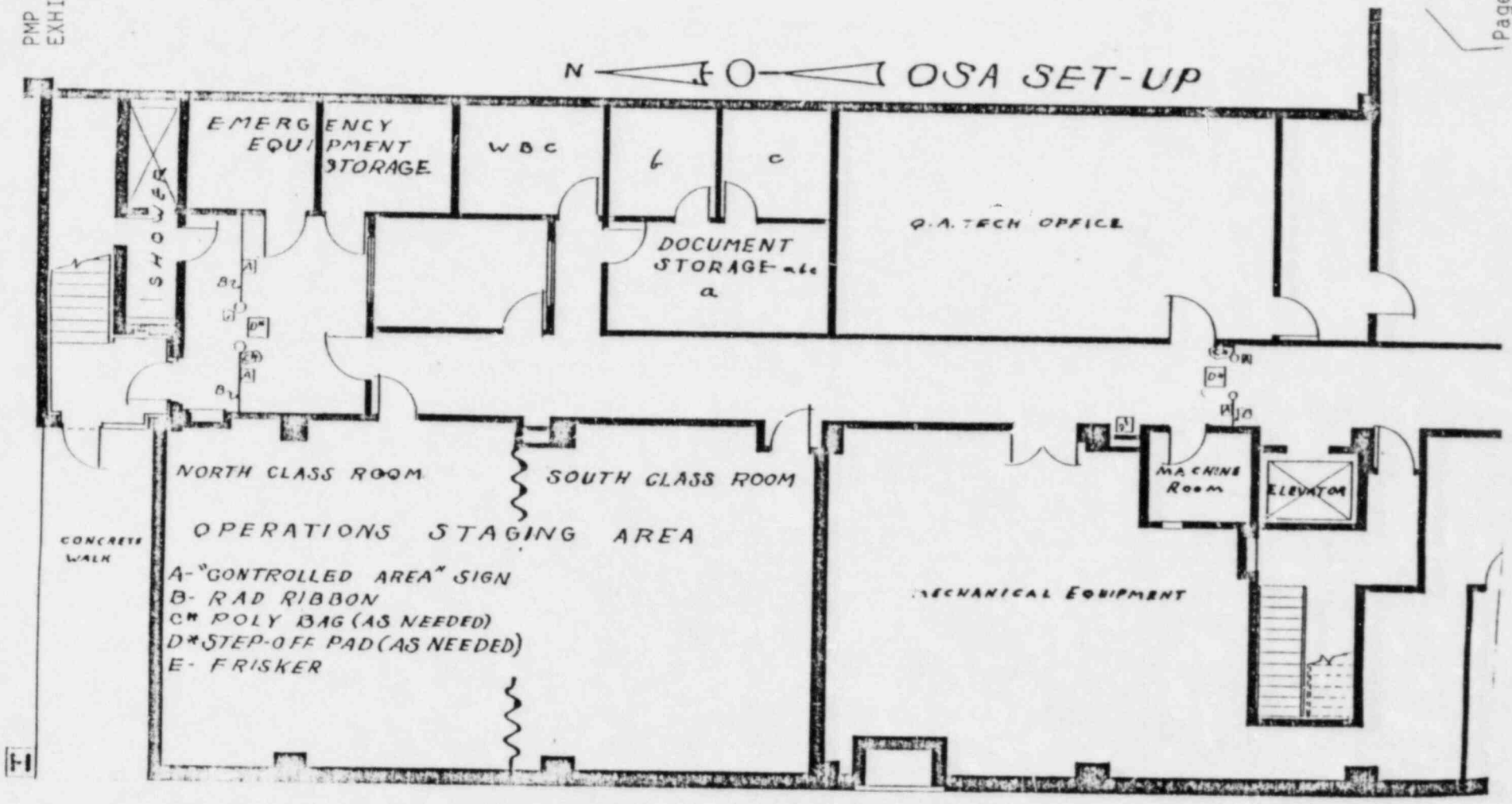
2) Connect radiation ribbon from one station to the north wall, just west of the door to the Control Room, and from the other station to the west wall, just south of the door.

3) Hang "Controlled Area" sign on each side of the barrier.

4) Place frisker on the west side of the barrier.

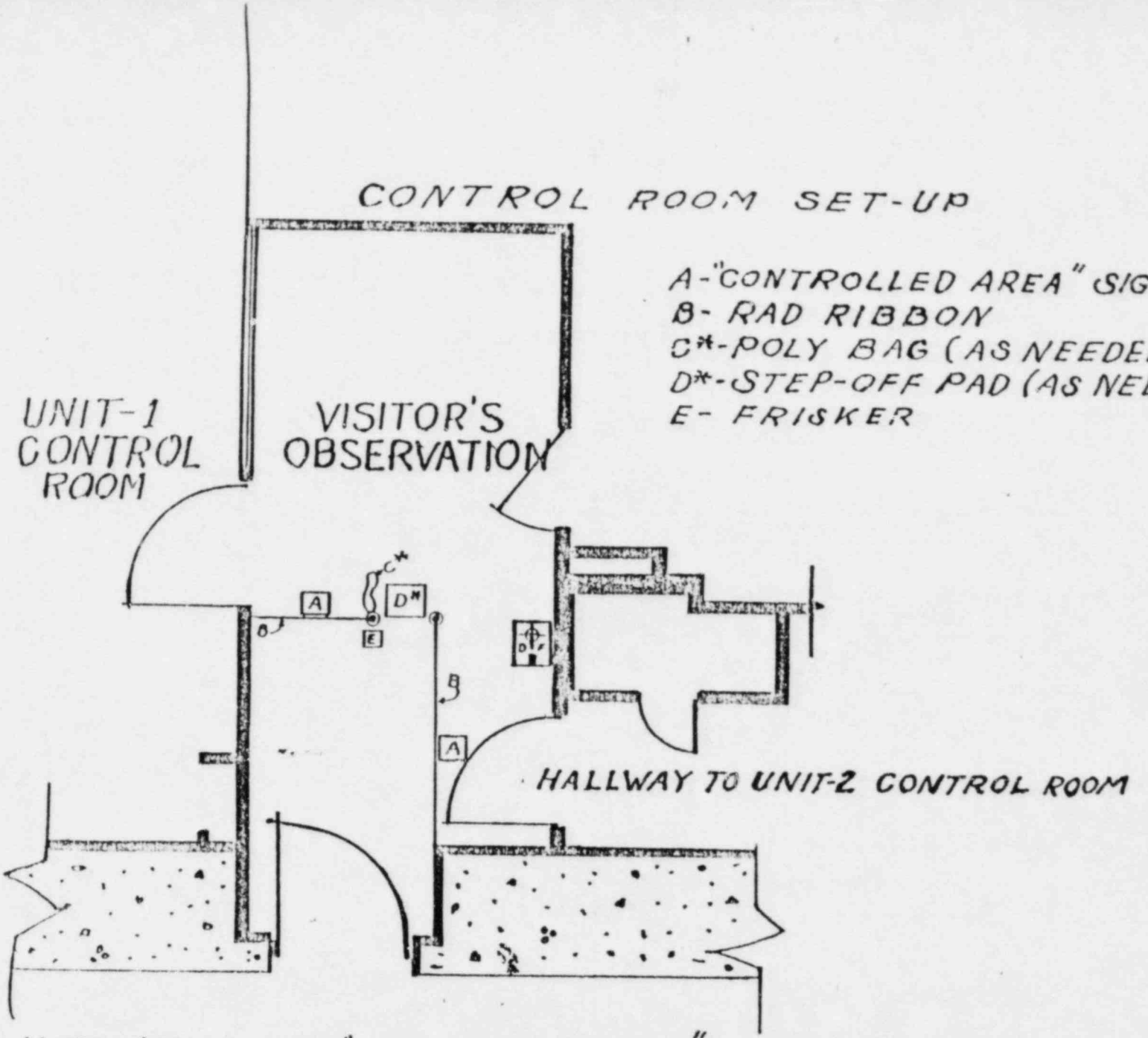
5) If necessary, put step off pad in place between stations, also set up a radiation waste poly bag.

6) Place a sign on Unit 2 Control Room door indicating that Unit 1 entrance is to be used.


N
OSA SET-UP
EMERGENCY EQUIPMENT STORAGE
SHOWER
WBC
b
c
DOCUMENT STORAGE
a
Q.A. TECH OFFICE
NORTH CLASS ROOM
SOUTH CLASS ROOM
OPERATIONS STAGING AREA
CONCRETE WALK
MACHINE ROOM
ELEVATOR
MECHANICAL EQUIPMENT
A- "CONTROLLED AREA" SIGN
B- RAD RIBBON
C* POLY BAG (AS NEEDED)
D* STEP-OFF PAD (AS NEEDED)
E- FRISKER

CONTROL ROOM SET-UP

A-"CONTROLLED AREA" SIGN
B- RAD RIBBON
C*-POLY BAG (AS NEEDED)
D*-STEP-OFF PAD (AS NEEDED)
E- FRISKER



NOTE: HANG SIGN "USE U-1 ENTRANCE" ACROSS THE U-2 ENTRANCE DOOR