Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379

May 17, 2000

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - EMERGENCY PLAN IMPLEMENTING PROCEDURE (EPIP) REVISION

In accordance with the requirements of 10 CFR 50, Appendix E, Section V, the enclosure provides the following EPIP:

EPIP	Revision	Title
EPIP-10	14	Medical Emergency Response

If you have any questions concerning this matter, please telephone me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,

Pedro Salas
Licensing and Industry Affairs Manager

Enclosure
cc: See page 2

NRR-037

A045

cc: Mr. R. W. Hernan, Project Manager (Enclosure)
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NRC Resident Inspector (Enclosure will be provided by
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Regional Administrator (Enclosure)
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Atlanta Federal Center
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Atlanta, Georgia 30303-3415

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-10

MEDICAL EMERGENCY RESPONSE

Revision 14

QUALITY RELATED

Reference Use

PREPARED/PROOFREAD BY: J. Randy Ford DATE: 04/ 26/ 2000

RESPONSIBLE ORGANIZATION: Emergency Preparedness

APPROVED BY John Casey DATE: 05/04/2000

REVISION DESCRIPTION:

EFFECTIVE DATE: 05/05/2000

Intent Change - Quarterly review of phone numbers. Revised typographical error in REACTs telephone number. Changed font and reformatted. Combined sections 4.3 and 4.4 and renumbered as needed. Revised to require RadCon only where the response location is inside the RCA or at the request of the Incident Commander or Fire Brigade leader for TVA standardization.

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1.0 PURPOSE

This procedure outlines the actions to be followed by the Medical Emergency Response Team (MERT) during medical emergencies.

2.0 SCOPE

The activation of the MERT and the medical alarm (extension 3911) is not required if the patient needs only minor treatment of cuts, scrapes, or illness and the following conditions are met:

- Medical or EMT personnel are immediately available to attend to the patient and no additional assistance needs to be summoned to assist in that treatment.
- Assistance is not required from Radcon, Operations, or Security.
- The patient is not in medical distress and
- Patient will not be transported offsite by TVA or HCEMS ambulance.

3.0 REFERENCES

3.1 EPIP-7, "Activation and Operation of the Operations Support Center"
3.2 EPIP-15, "Emergency Exposure Guidelines"
3.3 EPIP-17, "Emergency Equipment and Supplies"
3.4 SPP-3.5, "Regulatory Reporting Requirements"

4.0 INSTRUCTIONS

4.1 Initial Response

Upon discovering an ill or injured person, personnel shall:
A. Administer aid for any life threatening situation if trained.
B. Summon assistance from available personnel in the immediate area.
C. Notify the Control Room of the medical emergency by calling extension 3911.
D. Patients known or suspected of being in medical distress shall not be allowed to walk, especially when the cause of distress may be aggravated by exertion.

4.2 Control Room Response

The Control Room will obtain:
- Name of caller,
- Location (building, elevation, column),
- Type of medical emergency,
- Number of personnel involved,
- Immediate area hazards (radiological, safety), and
- Telephone number of caller.

4.3 Activation of the Medical Emergency Response Team (MERT)

The MERT shall consist of:
- Incident Commander [Unit Supervisor (US) Team Leader].
- Fire Operations Personnel (EMT and MERT Leader).
- Level I and/or II Responders.
- RADCON technician(s) if responding inside the RCA or if requested.
- Site Security Officer(s).
- Health Services - as requested

4.3 Activation of the Medical Emergency Response Team (Continued)

Upon receipt of the emergency call (code call), the Control Room will:

A. Notify the Shift Manager and the Incident Commander of the emergency.

B. Verify Fire Operations is notified by:
   1. Ringdown line to Fire Operations or
   2. Operations radio (channel F-3) or
   3. Call extension 7447 or 7448 or,
   4. Page Fire Operations by pushing the "FPU Page" button on the emergency phone (or pager 90478 if autodial is non-functional).

C. Perform a plant-wide PA announcement that a medical emergency has been reported to alert the MERT to respond to the location.

D. Confirm/coordinate MERT response (via radio or phone) until Incident Commander assumes control.

E. If the Operations Support Center (OSC) has been activated under EPIP-7, the MERT will coordinate the emergency by radio or telephone through the OSC Fire Operations Advisor, who shall ensure a Team Tracking Number is assigned for tracking and debriefing purposes.

4.4 Responsibilities of the Shift Manager

Shift Manager shall:

A. Establish and maintain communications with the Incident Commander.

B. Ensure the Health Services Station (if staffed) has been notified to standby and monitor the radio.

C. Notify Site Security to escort the ambulance onsite as required or establish access control at the helicopter landing zone.

D. If an ambulance is requested by Health Services and the MERT is not activated, alert the Incident Commander and MERT leader to coordinate support activities.

E. Notify industrial safety as time permits.

F. If transporting to an agreement hospital, the Shift Manager shall complete Attachment 1 and provide the information to the receiving hospital. Attachment 1 will be forwarded to the SQN Emergency Preparedness Manager for retention for two years.

G. Consider dispatching an Environmental Monitoring to assist in analyzing the samples taken by the plant RADCON group at the hospital. The van should be dispatched prior to ambulance departure from the site to ensure timely arrival at the hospital.

H. The Shift Manager is responsible for any further notifications in accordance SQN SPP-3.5 and applicable site procedures.

I. The Shift Manager should verify that the patient's emergency contact has been notified in accordance with applicable site procedures.

4.5 Responsibilities of the Incident Commander

Incident Commander/Unit Supervisor (US) will:

A. Provide direction on the scene until relieved by the MERT Leader.

B. Coordinate and direct plant personnel in support of medical response activities provided by the MERT, (i.e., Radiological Control or Security, as conditions warrant).

C. Determine from RADCON if patient was irradiated in excess of 5 Rem or is contaminated.

D. With the MERT Leader, determine the number of patients, appropriate hospital, and mode of transport for each and notify the Shift Manager.

E. Notify the Shift Manager of any TVA or Offsite emergency vehicle use.

F. Determine from the MERT Leader if the Health Services Nurse is needed and if needed, notify the Shift Manager to have Health Services respond.

G. With the MERT Leader, determine if RadCon support is needed and request support through the Shift Manager as needed.

4.6 Responsibilities of the Fire Operations MERT Leader

MERT Leader will:

A. Direct the on-scene medical response and rescue activities and determine mode of patient off site transport.

B. With the Incident Commander , determine if RadCon support is needed and request support through the Shift Manager as needed.

C. Lead the MERT in and out by best route.

D. Direct Site Security to secure the Triage area if needed.

E. With the Incident Commander, determine the number of patients, appropriate hospital, and mode of transport for each (See Appendix B).

F. Ensure that necessary medical treatment will take precedence over decontamination efforts.

G. Determine from RADCON if each patient was irradiated >5 Rem or is contaminated.

H. Request the HCEMS Paramedic or Supervisor become a member of the Command Post Organization upon arrival to ensure that patients are handled as quickly as possible and in the appropriate order based on their injuries.

I. Keep Shift Manager advised (through the Incident Commander) of the situation and request additional aid as needed.

J. When Lifeforce is called, contact Lifeforce on the TnEMS Frequency 155.205 Mhz (TnEMS Mutual Aid frequency).

K. Establish and assume responsibility for the Helicopter Landing Zone.

L. Request that the HCEMS medical attendant inform the Shift Manager if the ambulance is diverted to a different hospital after leaving site.

4.6 Responsibilities of the Fire Operations MERT Leader (Continued)

M. Request that the HCEMS medical attendant in the transporting vehicle follow-up with the receiving hospital and provide Estimated Time of Arrival (ETA), medical conditions, radiological conditions, and any pertinent patient information via radio or cellular phone immediately upon site departure.

N. If communication difficulties arise, the onsite Operations Fire Foreman or Shift Manager shall perform the follow-up notification by telephone. As a minimum, an updated ETA and confirmation of medical and radiological conditions shall be conveyed.

4.7 Responsibilities of the Fire Ops. EMT

The EMT will:

A. Assist in delivery of necessary medical and rescue equipment to the scene.

B. Provide emergency medical care as trained.

C. If needed, perform patient rescue and extrication from hazardous areas and assist in relocation to the Triage area (e.g.: elevation 706' breezeway outside the Work Coordination Center).

D. Provide ambulance transport and care as required.

4.8 Responsibilities of Health Services

Health Services (Nurse) will:

A. Remain at the Health Services Station while monitoring the patient's status via radio communications.

B. Prepare to assist with patient care in the event the patient is brought to the site Health Services Station.

C. Respond to the accident scene or triage area when requested (e.g., triage or multiple casualty incidents) by the Incident Commander through the SM. Security will arrange escort per 4.10.E.

D. As requested, coordinate radiological assessment and decontamination efforts with RADCON while onsite as the medical status permits. (See Appendix A.)

E. Perform follow-up notifications and provide the hospital with a medical history.

F. As required and as available, the plant nurse will provide any relevant medical information requested by the patient's attending physician.

4.9 Responsibilities of Radiological Control (RADCON)

Radiological Control (RADCON) will:

A. Determine if the response location is inside the RCA or if a potential exists for contamination or irradiation. If a potential exists, respond to the scene otherwise remain ready to subsequently respond if the Incident Commander or MERT Team Leader determine RadCon support is necessary.

4.9 Responsibilities of Radiological Control (Continued)

B. Advise the MERT of radiological conditions and protective actions including ALARA considerations and exposure control.

C. Provide contamination control and monitoring assistance during patient handling, transport, and decontamination. (Appendix A)

D. Determine if each patient was irradiated > 5 Rem or is contaminated. Personnel exceeding 5 Rem will be considered as "irradiated" under Section 2.0 of Appendix A.

E. If personnel contamination with injury has occurred, necessary medical treatment will take precedence over decontamination efforts.

F. Provide area and equipment contamination control during emergency and recovery phase activities.

G. Provide support to plant/ambulance/hospital personnel as necessary. Support may include activities deemed necessary by the MERT Leader or Incident Commander, such as establishing control zones to limit the spread of contamination from chemicals or radioactive materials.

H. If contamination or irradiation is suspected or confirmed, RADCON personnel (as available) will accompany the patient and provide radiological services as required. (See Appendix A)

I. As medical conditions allow, if internal contamination is suspected, RADCON shall initiate an isotopic analysis on a sample of the contamination involved and provide data to the receiving hospital as requested.

J. RADCON will provide the receiving hospital with radiological information upon arrival. As required, further information such as patient exposures by processed TLDs and isotopic analyses through gamma-ID results may be conveyed to the hospital's Radiation Safety Officer by telephone at first opportunity.

K. At the first opportunity and as information becomes available, RADCON will notify TVA Health Services anytime TVA personnel receive radiation doses in excess of the TVA occupational dose limits.

4.10 Responsibilities of Site Security

Site Security will:

A. Facilitate emergency personnel and equipment movement through security areas.

B. Provide crowd control at the accident scene, triage area, and ambulance and provide assistance as requested.

C. Provide access control to the Helicopter Landing Zone limiting access to those directly involved in patient care and transport.

D. Escort offsite ambulances to the accident scene or point of patient transfer, as required.

E. Escort Health Services personnel from the health station to the accident scene as required.

F. Badge out at the vehicle gate the ambulance crew and personnel being transported in a TVA ambulance as non-emergency traffic.

4.11 Supplies

A. As needed, Corporate Emergency Preparedness shall restock and inventory the Radiological Emergency Supply Cabinets located at the agreement hospitals in accordance with EPIP-17.

B. Specialized replacement items can be obtained in coordination with the SQN Emergency Preparedness Manager as required.

5.0 RECORDS

5.1 QA Records

None.

5.2 Non-QA Records

The Hospital and Personnel Notification Report in this Instruction is a Non-QA document and will be retained by the SQN Emergency Preparedness Manager for two years.

Appendix A
Page 1 of 2

1.0 GENERAL PATIENT CARE GUIDELINES

1.1 First aid and emergency medical care should be provided onsite to preserve life and to minimize injury and suffering.

1.2 The medical emergency response team will take appropriate medical action as directed by the EMT trained in emergency medical care until the patient is transferred to a higher medical authority.

1.3 The Medical Director at the Emergency Room should be consulted when in the EMTs judgment further professional attention is needed.

1.4 If no work related trauma, life-threatening conditions, contamination, or excessive exposure are involved or suspected and the patient is informed and capable, then the patient may have the choice of hospital when offsite medical attention is necessary.

1.5 The care of persons known or suspected to be associated with radiation exposure or contamination will be coordinated with RADCON. The essential aims of the medical-RADCON team are:

- Minimize the injury and further radiation exposure to the victim.
- Protect attending personnel from excessive and unnecessary radiation exposure.
- Control spread of radioactive contamination.
- Assess and document the patient's radiological exposure.
- Immediate lifesaving and disability limiting procedures will take precedence over noncritical decontamination and dosimetry assessment procedures.

1.6 As medical conditions allow, inform the patient of his/her radiological status.

2.0 IRRADIATED-NONCONTAMINATED

2.1 Remove the victim from further exposure providing only essential first aid in the process, then direct attention to medical care of other physical injuries.

2.2 Medical care of the radiation exposure is governed by the medical status of the patient and the findings of RADCON. In most cases the treatment of illness or physical injury takes precedence over treatment for radiation exposure.

2.3 Individuals who have received an acute whole body dose of less than 5 rem usually require no medical examination or treatment for the radiation exposure.

2.4 Individuals who have received an acute whole body dose greater than 5 Rem should have hematological studies performed to detect chromosomal aberrations or other changes in blood constituents, under the direction of a TVA physician representative.

2.5 Any personnel known or suspected of receiving radiation exposure in excess of the TVA occupational dose limits should be reported by RADCON personnel to TVA medical and the area medical chief as soon as possible. RADCON should document the amount and type of radiation and assist MEDICAL SERVICES in follow-up by supplying them with this information.

3.0 CONTAMINATED PATIENTS

3.1 The patient should be given initial emergency care by the MERT. All decontamination that the medical status of the patient will allow should be accomplished. The appropriate sequence of care must be determined on an individual basis by the medical-RADCON team. The injured person will be transported and treated in one of two ways:

A. If the person is severely injured, they may be transported directly to an agreement hospital. Every reasonable effort should be made to reduce the radioactive contamination level to less than 500 mRem per hour at one foot. Spread of contamination may be minimized by removing the patient's excess clothing and wrapping him in a sheet, as his injuries permit.

B. If cases of less severe injuries, the patient will be sent to the personnel decontamination facility to remove as much contamination as possible before being treated in the emergency treatment area or transferred to an agreement hospital.

3.2 The RADCON group will collect, identify, label, and analyze all biological specimens as required and deemed necessary. The RADCON Group will obtain the injured person's personal dosimetry and replace with equivalent dosimetry if appropriate.

3.3 The RADCON group will control contamination as necessary during transportation to the receiving hospital.

3.4 At the hospital, a RADCON representative will furnish radiological services as necessary to attending physicians and hospital personnel as requested.

4.0 GENERAL RADCON ASSISTANCE GUIDELINES

4.1 RADCON personnel will assist emergency room personnel in instituting contamination control procedures at the time of the radiation emergency admission.

4.2 Upon arrival at the hospital the lead RADCON person from the plant should report the radiological status to the hospital medical team leader.

4.3 If requested by the hospital, provide this assistance:

- Establish a checkpoint and monitoring station for entry and exit from the contamination control area.
- Survey patients and advise physician in charge of external radiation levels to personnel and of patient contamination.
- Survey personnel, equipment and facilities and designate those that must be restricted for decontamination.
- Supervise decontamination of personnel and facilities and release areas that are not contaminated.
- Direct handling of radioactive waste.
- Request the medical staff collect samples of nasal swabs, clothing, gauze, and materials used in cleansing for analysis. Place in plastic bags and label.

4.4 Survey the ambulance and its contents. Supervise decontamination if required. If the ambulance cannot be surveyed immediately it should be locked to prevent spread of contamination.

4.5 If deemed necessary, an Environmental Monitoring Van will be dispatched to assist in analyzing the samples taken by the plant RADCON group. The van should be dispatched prior to ambulance departure to ensure timely arrival at the hospital.

4.6 Collect contaminated material from hospital and return to site for disposal. Transport of this material will be in accordance with TVA Radiological Material Shipping Manual.

APPENDIX B
DETERMINATION OF BEST METHOD OF PATIENT TRANSPORT
Page 1 of 1

A. If the patient is suspected or known to have been irradiated (< 5 Rem) or contaminated with radioactive material, utilize an agreement hospital and ambulance, listed on Attachment 1.

B. All Sequoyah employees with service related traumatic injuries should be transported to an agreement facility, listed on Attachment 1.

C. If in shock or the condition is life threatening, he or she should be transported to the nearest facility, Memorial North Park Hospital if by ambulance or to Erlanger if by Lifeforce.

D. The selection of the Lifeforce helicopter or the transporting ambulance (SQN versus offsite ambulance) shall be primarily based upon the medical needs of the victim. Since the Fire Operations MERT Leader is responsible for the management of fire/EMT personnel onsite, he/she shall have the final responsibility for selection of the transportation vehicle. Considerations in making the selection include:

- The capabilities of the ambulance service shall be considered according to the medical needs of the patient (Advanced Life Support versus Basic Life Support services). The recommendations of the EMT or nurse should be considered in the decision process.
- The reduction in onsite response capabilities if the TVA ambulance is utilized.
- **Offsite ambulances shall be used as the primary means of transport unless** the medical emergency is life threatening ("load and go"), and the estimated arrival time for an offsite ambulance is unacceptable (adverse impact on patient's condition). To avoid these delays, requests for local ambulance or Lifeforce helicopter support shall be made as soon as the need for transport is identified.

  Examples of "Load and go" or life-threatening conditions:
  - severe airway obstructions not alleviated by manual means,
  - respiratory emergencies (tension pneumothorax),
  - uncontrolled severe bleeding,
  - head injury with unilateral blown or dilated pupils,
  - open chest or abdominal wounds,
  - severe burns,
  - deteriorating level of consciousness or unconsciousness from any cause,
  - cardiac arrest, and
  - severe medical problems including heart attack, stroke, heatstroke, poisoning, abnormal childbirth, and signs or symptoms of shock.

APPENDIX C
Page 1 of 1

TVA has an agreement with the Radiation Emergency Assistance Center/Training Site (REAC/TS) Cytogenetics Laboratory for support services including a white blood cell lymphocyte culture for dose assessment of TEDE exposures to ionizing radiation.

Upon the order of a physician, and in coordination with a health physicist, REAC/TS shall be contacted to request and coordinate the shipment and return of a blood sample kit. This kit contains all necessary collection, shipping, and instruction materials. The kit is provided by REAC/TS to promote optimal test results by use of controlled sample handling materials.

KEY INFORMATION ON CYTOGENTIC BLOOD STUDIES:

WHEN:

Upon the order of a responsible physician, with verification that known or suspected ionizing radiation exposure **(acute TEDE)** exceeds **5 REM.**

FREQUENCY:

Once, unless directed otherwise by REAC/TS or physician.

TO REQUEST KIT:

Attending physician should contact:

REAC/TS, (865) 576-3131 - day time phone number

(865) 576-1005 - after hours.

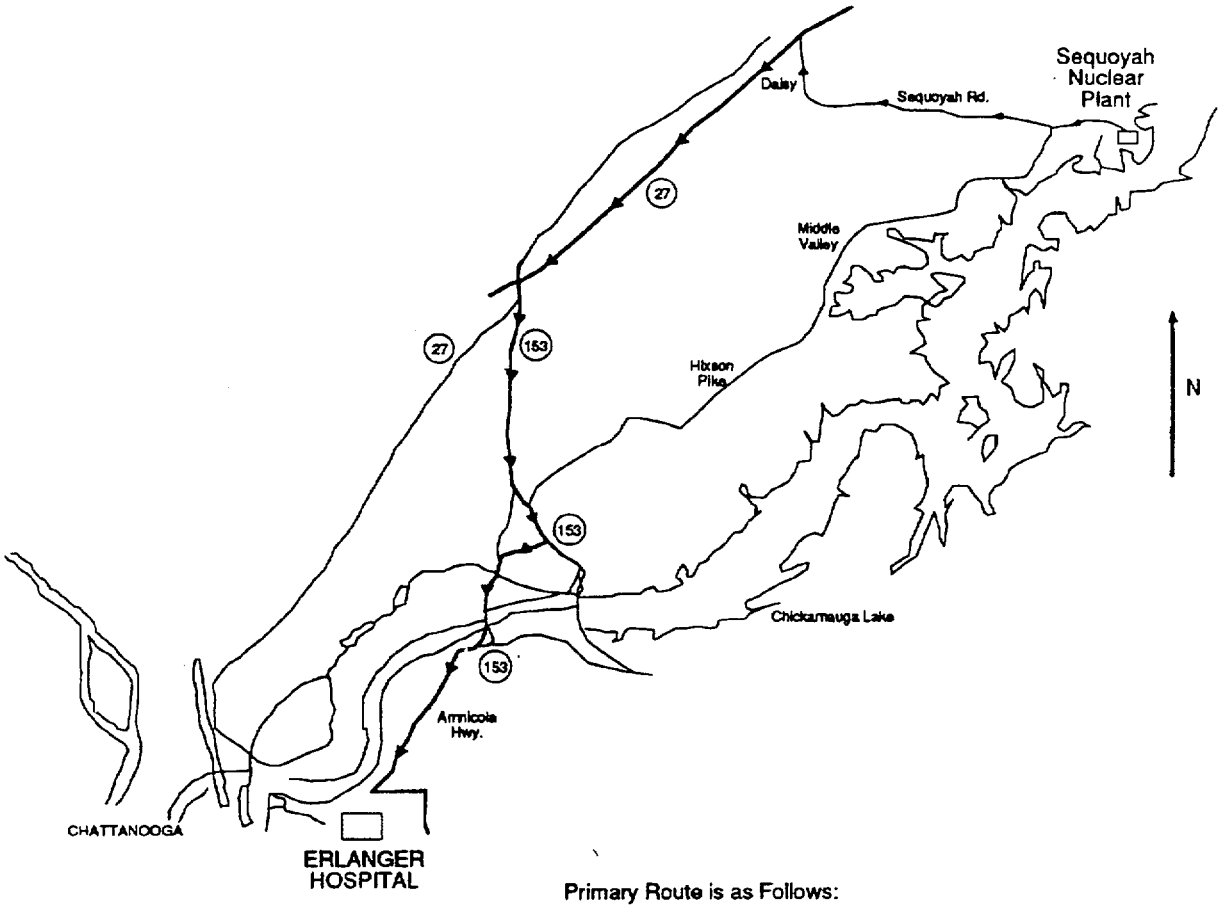
REPORT RESULTS TO:

Attending Physician

Refer to REND,
Section K, Medical Support, 1. TVA Health Services

APPENDIX D
Page 1 of 4

SQN TO CHATTANOOGA



Primary Route is as Follows:

Leave Sequoyah Nuclear Plant via Sequoyah Road to Highway 27 (6.3 miles) Highway 27 to Highway 153 (6.6 miles) Highway 153 to C. B. Robinson Connector Road (4.2 miles) C. B. Robinson Connector Road to Amnicola Highway (2.5 miles) Amnicola Highway to Riverside Drive (2.6 miles) (See Locality Map Erlanger Medical Center Area for the following) Riverside Drive to 3rd Street Exit (1.5 miles) 3rd Street Exit to 4th Street via Mabel Street (0.1 miles) 4th Street to Erlanger Hospital via Lansing Street 50 3rd Street (0.6 miles).

APPENDIX D
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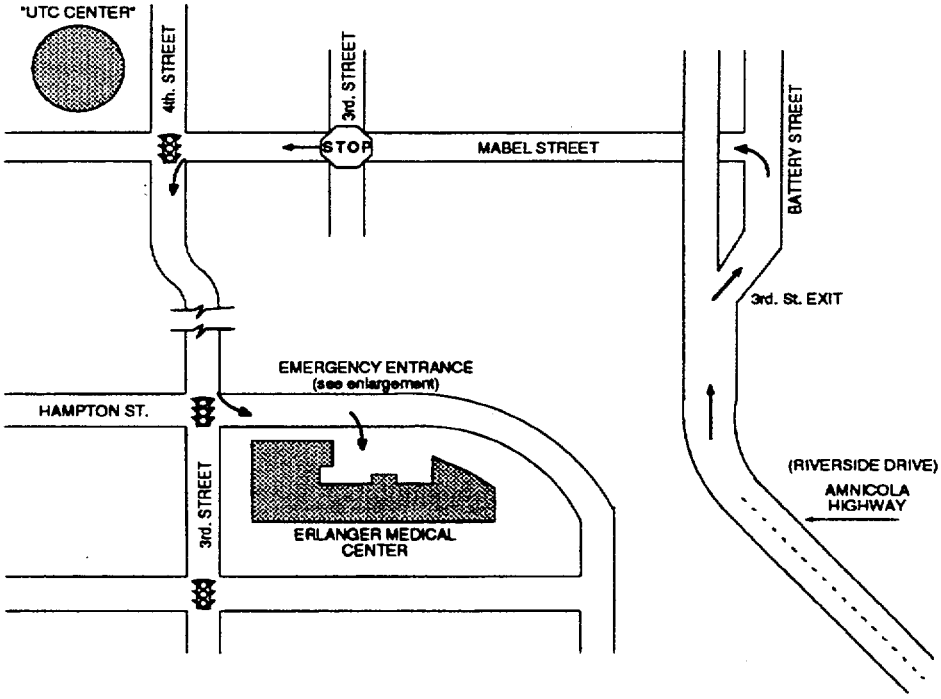
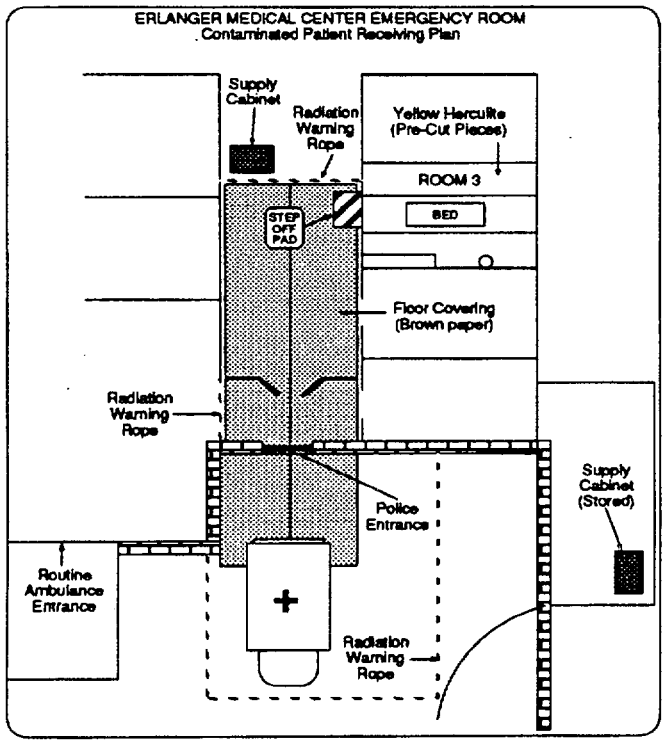
ERLANGER MEDICAL CENTER AREA





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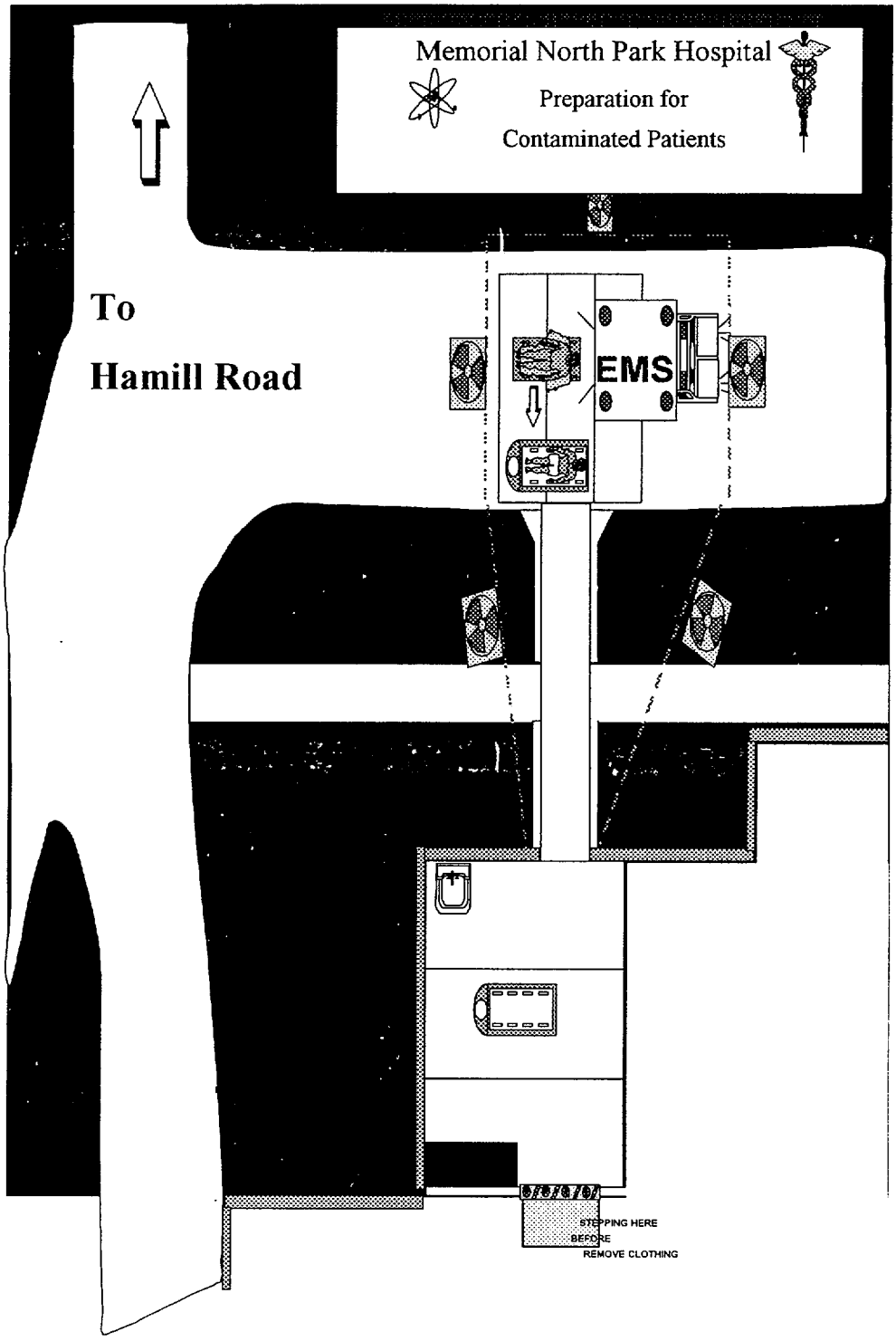

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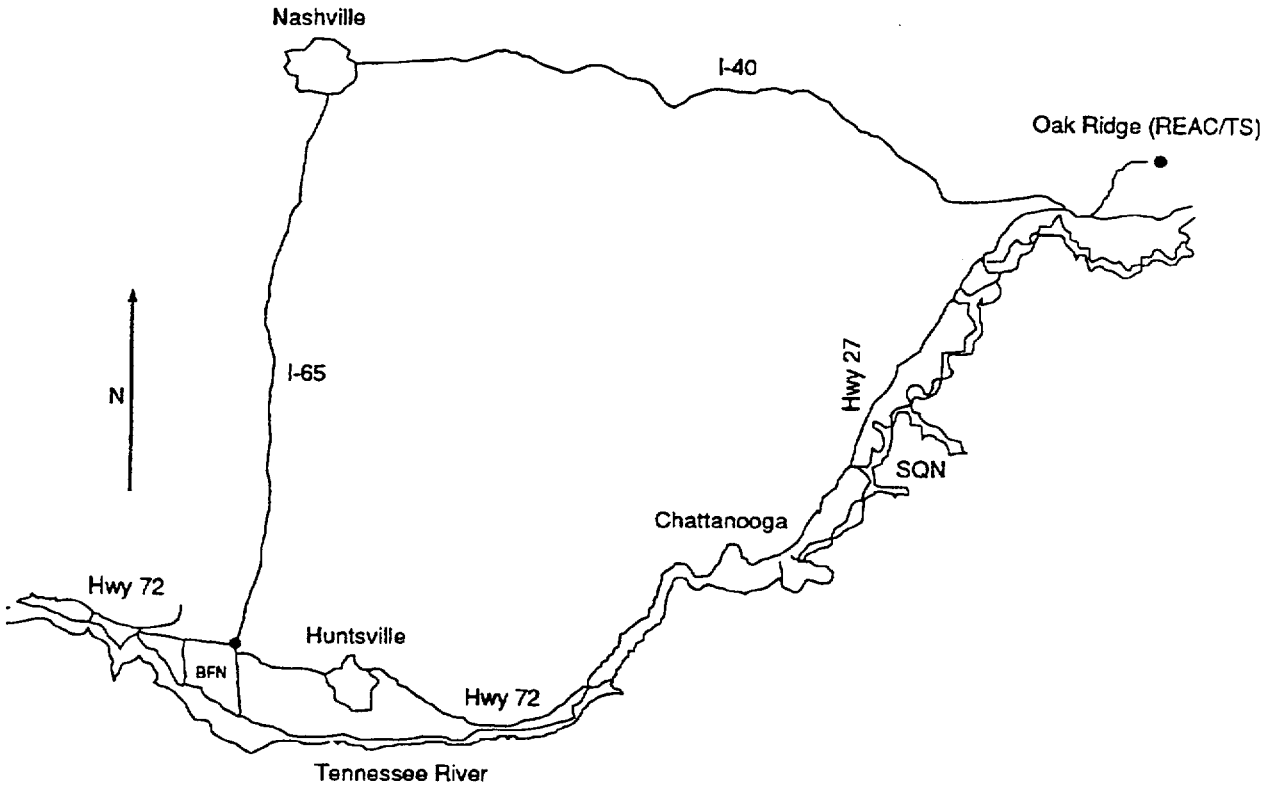

Sequoyah Nuclear Plant to REAC/TS
Via Hwy 27: Travel distance 110 Mi.
Travel time 1.5 Hrs at 70 mph

SOURCE NOTES

REQUIREMENTS STATEMENT	SOURCE DOCUMENT	IMPLEMENTING STATEMENT
	NP Radiological Emergency Plan (NP-REP)	

Attachment 1
Page 1 of 2

HOSPITAL AND PERSONNEL NOTIFICATION REPORT

The Shift Manager shall complete this form for individuals being transported to an agreement hospital (Memorial Northpark or Erlanger). He shall notify the destination hospital **as soon as** the need for off site transportation is determined.

Shift Manager _____

Date _____/_____/_____ **Time** _____ **Hospital**_____

Person Contacted _____ **Title**_____

MESSAGE TO THE HOSPITAL

Sequoyah Nuclear Plant will be sending _____ (number) injured person(s) to your hospital Emergency Department by _____ Ambulance _____ Lifeforce.

The victim(s) is:

___ Confirmed, **NOT** a radiation accident victim - no radiological hazards exist (NOT contaminated and NOT irradiated).

___ Radiological conditions are **unknown** at this time. (survey incomplete due to injuries or location)

___ **Contaminated** with radioactive material
____ Externally at _____ CPM or _____ mrad.
____ Internally

___ **Irradiated** in excess of 5 rem - Expected Exposure of _____ Rem.

Medical condition and ETA should be provided by the EMT upon departure from the site.

____ **Confirmation call- back from the Hospital received.**
____ **SQN Plant Management notified.**
____ **SQN Industrial Safety notified.**
____ **Employee Manager's Notified.**
____ **SSP 3.5 Notifications Complete.**

ROUTE COMPLETED FORM TO EP MANAGER FOR RETENTION

Attachment 1
Page 2 of 2

HOSPITAL AND PERSONNEL NOTIFICATION LIST

A. SEQUOYAH EMERGENCY NUMBERS

Fire/Medical Emergency	- 3911
Fire Operation Unit	- 7448 or 7447
Health Station (DS/N)	- 8026 or 8027
Nuclear Security	- 6144 or 6184
Shift Manager	- 6211 or 7211
Radiological Control	- 6300 or 6160
Industrial Safety	- 6647

B. SEQUOYAH NURSING STAFF (Home Telephone Numbers)

Andy Miller, RN, ONP (Supervisor)	842-7005	Hixson, TN
Carolyn O'Brien, RN	842-5470	Hixson, TN
Melanie Cooper Theisen, RN	886-1949	Signal Mtn, TN

C. SQN AMBULANCE

7447 or Cellular Telephone 667-6274

D. LOCAL AGREEMENT AMBULANCE SERVICE

Hamilton County Ambulance	Erlanger Lifeforce
(423) 622-7777	(423) 778-5433
Alternate: 911	Alternate: 1-800-523-6723
MEDCOM - #633 (from Cell Phone)	NOTE: Inform Lifeforce that communications will be via the TnEMS Mutual Aid Frequency 155.205MHz.

E. AGREEMENT HOSPITALS

Memorial North Park Hospital	Erlanger Medical Center
2051 Hamill Road	975 East Third Street
Chattanooga, TN 37343	Chattanooga, TN 37403
(423) 870-6164 (24 hours) or	(423) 778-7296 (24 hours)
(423) 870-6100	(423) 778-7664

F. REAC/TS, OAK RIDGE, TENNESSEE

Commercial (0800-1630)	(865) 576-3131
24 hour Emergency - DOE EOCC	(865) 576-1005