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May 5, 2003

10 CFR Part 50, App E

U.S. Nuclear Regulatory Commission  
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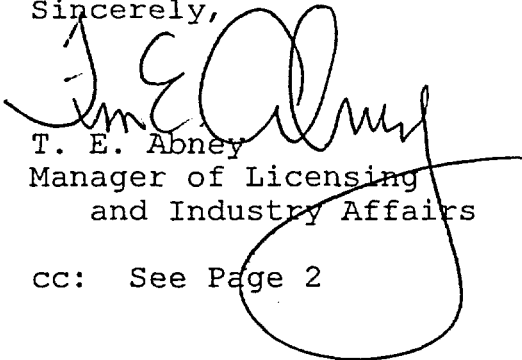
Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, and 3 -  
EMERGENCY PLAN IMPLEMENTING PROCEDURE (EPIP) REVISIONS**

TVA is submitting this notification in accordance with the requirements of 10 CFR Part 50, Appendix E, Section V. Specifically, EPIPs were revised, namely, EPIP-8, Revision 16 and EPIP-10, Revision 24. The effective date for these revisions is April 21, 2003. If you have any questions, please telephone me at (256) 729-2636.

Sincerely,



T. E. Abney  
Manager of Licensing  
and Industry Affairs

cc: See Page 2

A045

U.S. Nuclear Regulatory Commission  
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May 5, 2003

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ENCLOSURE  
TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3

EMERGENCY PLAN IMPLEMENTING PROCEDURE (EPIP) REVISIONS  
EPIP-8 AND EPIP-10

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SEE ATTACHED

GENERAL REVISIONS

FILING INSTRUCTIONS

FILE DOCUMENTS AS FOLLOWS:

PAGES TO BE REMOVED

EPIP-8, Revision 15  
EPIP-10, Revision 23

PAGES TO BE INSERTED

EPIP-8, Revision 16  
EPIP-10, Revision 24

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

**EMERGENCY PLAN IMPLEMENTING PROCEDURE**

**EPIP-8**

**PERSONNEL ACCOUNTABILITY AND EVACUATION**

**REVISION 16**

PREPARED BY: T. W. CORNELIUS

PHONE: 2038

RESPONSIBLE ORGANIZATION: EMERGENCY PREPAREDNESS

APPROVED BY: JEFF LEWIS

DATE: 04/17/2003

EFFECTIVE DATE: 04/21/2003

LEVEL OF USE: REFERENCE USE

**QUALITY-RELATED**

### HISTORY OF REVISION/REVIEW

<u>REV. NO.</u>	<u>DATE:</u>	<u>REVISED PAGES</u>		<u>REASON FOR CURRENT REVISION</u>
14	3/20/02	6, 10	IC-17	<p>This revision is being conducted to add the Contractor Facility Complex (CFC) to the list of buildings located outside the protected area for the assembly of organizations not reporting to a assembly area inside the protected area.</p> <p>Page 6 - Revise the "Note" to include the Contractor Facility Complex in the list of reporting areas for assembly outside the protected area.</p> <p>Page 10 - Revise the evacuation checklist for "Outside the Protected Area" assembly areas to include the Contractor Facility Complex (CFC)</p>
15	6/8/02	All	IC-18	<p>Format EPIP to EPIP Writers Guide specifications and place the Security Advisory information in procedure. EPIP-8, revision 15 is being issued to incorporate changes resulting from the letter, NEI to NRC (to Mr. Bruce A. Boger) dated December 18, 2001 requesting confirmation for EAL basis change to include response to a Site-Specific Credible Threat. This letter was developed in response to the NRC's October 6, 2001 Safeguards Advisor. The change to this EPIP is a consequence to the EAL change and other information contained in the order. This revision more effectively provides actions and guidance for all personnel within the BFN Owner Controlled Area.</p>
16	4/15/03	7,8,18,19	IC-19	<p>This revision is being conducted to update the Assembly and Accountability Areas.</p>

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## 1.0 INTRODUCTION

### 1.1 Purpose

The purpose of this procedure is to provide a means for administering a protective action response such as the capability to account for all individuals within the Protected Area (PA), the evacuation of all non-emergency personnel within the Owner Controlled Area and PA, in addition to the evacuation of personnel in specific affected plant area(s). The scope of this procedure includes emergency and non-emergency response personnel, visitors, contractor/construction personnel and other persons who may be within the Owner Controlled Area during an emergency situation.

This procedure will be initiated ordinarily by way of an emergency classification procedure step (i.e., EPIP-2, -3, -4, and -5). If situations were to exist, where in the judgment of the Shift Manager/Site Emergency Director (SED), it become prudent to initiate the process of Assembly and accountability and/or evacuation, this procedure can be entered and initiated via that judgment.

## 2.0 REFERENCES

### 2.1 Industry Documents

- A. NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
- B. 10 CFR 50.47, Code of Federal Regulations
- C. NRC Information Notice 2002-14, Ensuring a Capability to Evacuate Individuals, Including Members of the Public, from the Owner-Controlled Area

### 2.2 Plant Instructions

- A. TVA Radiological Emergency Plan
- B. EPIP - 2, Notification of Unusual Event
- C. EPIP - 3, Alert
- D. EPIP - 4, Site Area Emergency
- E. EPIP - 5, General Emergency
- F. EPIP - 14, Radiological Control Procedures

## 3.0 INSTRUCTIONS

### 3.1 Activation of the Assembly and Accountability Process

#### A. Shift Manager/Site Emergency Director

1. The Shift Manager or Site Emergency Director shall initiate the activation of the assembly and accountability process.
  - a. The Shift Manager or Site Emergency Director can delegate a designee to carry out the actions of this process, but can not delegate the decision to activate the process.
2. Refer to Appendix C for activation.

### 3.2 General Personnel Information

#### A. Normal Entering and Exiting the plant Protected Area (PA)

1. Individuals entering the plant Protected Area shall:
  - Swipe their badge into the entry card reader,
  - Enter the Protected Area in accordance with security procedures.

2. Individuals exiting the Protected Area shall:
  - Swipe their badge into the exit card reader in the appropriate exit portals.
  - Exit the protected area in accordance with security procedures.
3. Entry and exit card readers function as accountability card readers for personnel exiting the PA.

3.3 Particular Area Evacuation

Plant conditions delegate operations to evacuate or request the evacuation of particular plant areas through the TSC.

- A. The Shift Manager/Site Emergency Director (SED) or designee shall make a public address (PA) announcement similar to;
 

"Attention all personnel. Conditions in the (area to be evacuated) require an evacuation of the area. Leave the (area to be evacuated) immediately."
- B. Personnel in the affected area(s), upon hearing the public address announcement or being notified of the particular area evacuation by any means shall do the following:
  1. If working in a contaminated zone, exit the zone in accordance with Radiological Control (RADCON) procedures, unless instructed otherwise by RADCON.
  2. Exit the affected area in an orderly manner.
- C. Personnel not in the affected area(s), should continue assigned tasks if not instructed otherwise and should not enter the affected area(s) until the "All Clear" has been announced or directed through emergency response processes.

3.4 Site Assembly and Accountability

A three-minute undulating siren (a siren that raises and lowers in volume and pitch), strobe lights, or public address announcements are the general methods for notifying personnel that emergency conditions exists requiring the assembly and accountability of site personnel. Upon recognition that the assembly and accountability process has been activated, all personnel shall begin immediately to take applicable actions.

- A. Non-Emergency Responders With Assigned Assembly Areas
  1. Upon recognition of the assembly and accountability process, non-emergency responders with assigned assembly areas, shall proceed immediately to their designated assembly areas as listed on Appendix A.
  2. Arriving at the assembly area, personnel shall:
    - a. Swipe their badge into the accountability card reader (applies only to those assembly areas within the protected area),
    - b. Remain in the designated assembly area until released by the Site Emergency Director (SED) or a plant evacuation is ordered, follow the instructions of Nuclear Security.

**B. Non-Emergency Responders With No Assigned Assembly Area**

1. Non-Emergency Responders with no assigned assembly area represent unescorted visitors, contractors/construction personnel, and others persons in public access areas on or passing within the Owner Controlled Area.
2. Upon recognition of the assembly and accountability process, non-emergency responders with no assigned assembly area, shall proceed immediately to their vehicle and exit the Owner Controlled Area.

**C. Emergency Responders**

1. Upon recognition of the Assembly and Accountability process, emergency responders, shall proceed immediately to their designated assembly area as listed on Appendix B.
2. Arriving at the designated assembly area, personnel shall:
  - a. Swipe their badge into the accountability card reader,
  - b. Sign the Accountability Roster Form, Appendix I,
  - c. Review their emergency responsibilities and begin work,
  - d. If a plant evacuation is ordered, all emergency responders will remain in their designated assembly area.

**D. Emergency Responders Having Escort Responsibilities**

Emergency Responders, will take the applicable steps to have their visitor transferred to a non-emergency responder for relocation to an appropriate assembly area.

**E. Visitors**

Visitors shall remain with escorts and swipe their badge into the appropriate accountability card reader.

**F. Special Conditions Concerning Assembly and Accountability**

1. If a person cannot reach his designated assembly area within 20 minutes, he should go to the nearest designated area and swipe his badge into the card reader. He should remain in that assembly area. Review Appendix A and B list assembly area locations.
2. If the accountability card reader will not accept a badge, Nuclear Security should be contacted immediately at extension 3238 or 2219.
3. If a card reader or assembly area cannot be accessed, Nuclear Security should be contacted immediately at extension 3238 or 2219.

**G. Shift Manager/Site Emergency Director**

When conditions have been met that require the activation of the assembly and accountability process, the Shift Manager/Site Emergency Director will implement Appendix C of this procedure.

**H. Nuclear Security**

When notified that conditions have been met that require the activation of the assembly and accountability process, or upon indications that assembly and accountability has been initiated, Nuclear Security will implement Appendix D of this procedure.

**I. Radiological Control (RADCON)**

When notified that conditions have been met that require the activation of the assembly and accountability process, or upon indication that assembly and accountability has been initiated, Radiological Control will implement Appendix E of this procedure.

**3.5 Evacuation of Non-Emergency Response Personnel**

A site evacuation will be conducted upon an order issued by the Shift Manager/Site Emergency Director. This Order will be issued to the TSC Nuclear Security Manager or the Nuclear Security Shift Supervisor or their designee, following the completion of assembly and accountability.

**A. Non-Emergency Responders Within the Plant Protected Area.**

1. All personnel assembled in designated assembly areas within the protected area shall remain in those areas until released for the purpose of evacuation. Visitors shall remain with escorts until visitors have exited the protected area.
2. Nuclear Security will by public address announcement or dispatching security personnel, brief and release persons in assembly areas.
3. Once released, personnel shall go immediately to their appropriate protected area exit portal. Personnel shall swipe their badge into the exit card reader or as instructed by Nuclear Security. The protected area shall be exited in accordance with security procedures unless otherwise instructed.
  - a. If for any reason personnel can not go directly to their designated Protected Area exit portal, Nuclear Security should be contacted immediately.
  - b. If for any reason the exit card reader will not properly acknowledge a badge, Nuclear Security should be contacted immediately.
4. Personnel shall proceed to their vehicle and evacuate from the site to their place of residence, following all briefing information provided to you by Nuclear Security. Exit routes leading away from the plant may be suggested by Nuclear Security.
5. All personnel evacuating should anticipate that Owner Controlled Area road blocks will be established and if conditions require, RADCON will be monitoring vehicles and personnel as they exit.
6. Upon exiting the Owner Controlled Area, personnel shall follow all guidance of state and local authorities.

- B. Non-Emergency Responders Within the Owner Controlled Area Excluding the Plant Protected Area.
  - 1. All personnel assembled in designated assembly areas within Owner Controlled Area excluding the Protected Area shall remain in those areas until released for the purpose of evacuation.
  - 2. Nuclear Security will dispatch security personnel directly to Owner Controlled Area Assembly Areas, brief and release assembled personnel.
  - 3. Once released personnel shall proceed to their vehicle and evacuate from the site to their place of residence, following all briefing information provided to you by Nuclear Security. Exit routes leading away from the plant may be suggested by Nuclear Security.  
  
If for any reason personnel can not proceed directly to their vehicle and evacuate, the site Nuclear Security shall be contacted immediately.
  - 4. All personnel exiting the site Protected Area should anticipate that Owner Controlled Area road blocks will be established and if conditions require, RADCON will be monitoring vehicles and personnel as they exit.
  - 5. Upon exiting the Owner Controlled Area, personnel shall follow all guidance of state and local authorities.
  
- C. Emergency Responders  
  
Emergency Responders shall remain in Emergency Centers and shall not evacuate from the site.
  
- D. Shift Manager/Site Emergency Director  
  
When conditions have been met that require an order to evacuate non-emergency response personnel, the Shift Manager/Site Emergency Director will implement Appendix F of this procedure.
  
- E. Nuclear Security  
  
When notified that an order to evacuate site non-emergency response personnel has been issued by the Shift Manager/Site Emergency Director, Nuclear Security will implement Appendix G of this procedure.
  
- F. Radiological Control  
  
When notified that an order to evacuate site non-emergency response personnel has been issued by the Shift Manager/Site Emergency Director, Radiological Control will implement Appendix H of this procedure.

## 4.0 DOCUMENTATION

## 5.0 ILLUSTRATIONS /APPENDICES

- Appendix A - Non-Emergency Responders Assembly Areas
- Appendix B - Emergency Responders Emergency Facility/Assembly Areas
- Appendix C - Shift Manager/Site Emergency Director - Assembly and Accountability Actions
- Appendix D - Nuclear Security - Assembly and Accountability Actions
- Appendix E - Radiological Control - Assembly and Accountability Actions
- Appendix F - Shift Manager/Site Emergency Director - Evacuation Actions
- Appendix G - Nuclear Security - Evacuation Actions
- Appendix H - Radiological Control - Evacuation Actions
- Appendix I - Accountability Roster

LAST TEXT

APPENDIX A  
Page 1 of 1

**NON-EMERGENCY RESPONDERS ASSEMBLY AREAS**

Designated Assembly Areas Within the Plant Protected Area	Reporting Organizations
Plant Maintenance Building 1 <sup>st</sup> Floor (Locker Area)	<ol style="list-style-type: none"> <li>1. Radcon/RadChem Personnel located in the WSP Building</li> <li>2. NRC Personnel located in the WSP Building</li> <li>3. Document Control and Records Management Staff</li> </ol>
Plant Maintenance Building 1 <sup>st</sup> Floor	<ol style="list-style-type: none"> <li>1. All Non REP Trained Maintenance Craftsmen</li> </ol>
Plant Maintenance Building 2 <sup>nd</sup> Floor	<ol style="list-style-type: none"> <li>1. Maintenance Production &amp; Maintenance Program Support Staff</li> <li>2. Outage and Daily Scheduling Staff</li> </ol>
Fire Operations Building	<ol style="list-style-type: none"> <li>1. Fire Operations Support Staff</li> <li>2. Safety Staff</li> </ol>
Plant Manager's Office Foyer Area	<ol style="list-style-type: none"> <li>1. Plant Manager's Office Staff</li> <li>2. Operations Office Staff</li> <li>3. Maintenance Office Staff</li> <li>4. RADCON Office Staff</li> <li>5. Outage Office Staff</li> <li>6. Work Control Center Staff</li> </ol>
East Access Portal Exit	Personnel from all other organizations not listed who utilize the east portal as their regular entry point.
West Access Portal Exit	Personnel from all other organizations not listed who utilize the west portal as their regular entry point.

Designated Assembly Areas within Owner Controlled Area (Outside the Plant Protected Area)	Reporting Organizations
Administration Building Common Maintenance Building BFN Training and Visitor Center Materials Procurement Complex Modifications Fabrication Shop Modifications Administration Building Unit 1 Restart Services Building North Administration Building South Administration Building	<p>ALL personnel exiting the east or west security portals</p> <p>ALL personnel within the Owner Controlled Area excluding the Protected Area</p>

APPENDIX B  
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EMERGENCY RESPONDERS EMERGENCY FACILITY/ASSEMBLY AREAS

Designated Assembly Area	Reporting Organizations
Unit 1 and 2 Control Rooms	All operations personnel in Control Bays, Unit 1/2
Unit 3 Control Room	All operations personnel in Control Bays, Unit 3
Technical Support Center	TSC staff
Operations Support Center	OSC staff
OSC Staging Area	<ol style="list-style-type: none"> <li>1. All On-shift REP Trained Maintenance Craftsmen</li> <li>2. Fire Protection personnel</li> <li>3. Tool Room personnel</li> <li>4. AUO Operations personnel assigned to Staging Area</li> </ol>
Radiological Control (RADCON)	RADCON Field Operations personnel
Radiochemistry Laboratory	Chemistry Control personnel



APPENDIX C  
Page 1 of 3

**SHIFT MANAGER/SITE EMERGENCY DIRECTOR - ASSEMBLY AND ACCOUNTABILITY ACTIONS**

The following appendix shall be utilized by the Shift Manager/Site Emergency Director (SM/SED) or designee for the purpose of conducting site assembly and accountability actions.

- |   | Initials                 | Time  |
|---|--------------------------|-------|
| 1. The SM/SED has determined that conditions require the activation of the assembly and accountability siren system and process.                                    | _____                    | _____ |
| 2. <b>NOTIFY...</b> Nuclear Security (NS) at extension 3238 or 2219 that:   | <input type="checkbox"/> |       |
| A. The assembly and accountability sirens will be activated immediately.  |                          |       |
| AND   |                          |       |
| B. NS should implement EPIP-8, Appendix D.  |                          |       |
| 3. <b>NOTIFY...</b> Radiological Control (RADCON) at extension 7865 that:   | <input type="checkbox"/> |       |
| A. The assembly and accountability sirens will be activated immediately.  |                          |       |
| AND   |                          |       |
| B. RADCON should implement EPIP-8, Appendix E.  |                          |       |
| 4. <b>MAKE...</b> a public address announcement similar to:   | <input type="checkbox"/> |       |
| "Attention all plant personnel, the site assembly and accountability process has been initiated. All personnel report immediately to your assigned assembly areas." |                          |       |
| (REPEAT)  |                          |       |
| 5. <b>ACTIVATE...</b> the assembly and accountability sirens.   | _____                    | _____ |
| 6. <b>WHEN...</b> the Assembly and Accountability Sirens have completed the 3-minute cycle and silenced.  | <input type="checkbox"/> |       |
| <b>MAKE...</b> a PA announcement similar to:  |                          |       |
| "Attention all plant personnel, the site assembly and accountability process has been initiated. All personnel report immediately to your assigned assembly areas." |                          |       |
| (REPEAT)  |                          |       |

APPENDIX C  
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SHIFT MANAGER/SITE EMERGENCY DIRECTOR - ASSEMBLY AND ACCOUNTABILITY ACTIONS

**NOTE**

If at any time during the assembly and accountability process RADCON determines that radiation guidelines for an assembly area(s) have been exceeded, request NS to re-locate affected personnel to another assembly area or evacuate affected personnel off-site.

7. **NOTIFY...** Central Emergency Control Center (CECC) Director either by the direct ring-down telephone in the TSC or at extension 751-1614.

**OR**

If the CECC Director can not be reached, notify the Operations Duty Specialist (ODS) at extension 751-1700 that:

- A. The assembly and accountability sirens have been activated.

**AND**

- B. BFN EPIP-8 is currently being implemented for assembly and accountability.

8. **WHEN...** Notified by NS that the assembly and accountability process has been completed.

**THEN.... MAKE** a public address announcement similar to:

"Attention all plant personnel, the site assembly and accountability process has been completed. All personnel remain in your assigned assembly areas."

(REPEAT)

9. **VERIFY** with the SM/SED, that conditions at this time require an order to evacuate all non-emergency response personnel from the Owner Controlled Area.                        
Initials Time

10. **IF...** Conditions at this time, DO require an order to evacuate all non-emergency response personnel from the Owner Controlled Area.

**THEN...** Initiate Appendix F of this procedure (EPIP-8).

APPENDIX C  
Page 3 of 3

## SHIFT MANAGER/SITE EMERGENCY DIRECTOR - ASSEMBLY AND ACCOUNTABILITY ACTIONS

11. IF... Conditions at this time, DO NOT require an order to evacuate all non-emergency response personnel from the Owner Controlled Area.

THEN... Exit this procedure. Re-enter this procedure at Appendix F when it has been determined by the SM/SED that conditions require an order to evacuate all non-emergency response personnel.

APPENDIX D  
Page 1 of 3

**NUCLEAR SECURITY - ASSEMBLY AND ACCOUNTABILITY ACTIONS**

The following appendix shall be utilized by the TSC Security Manager or if unavailable the Security Shift Supervisor or designee for the purpose of conducting a Site Assembly and Accountability actions.

- |   | Initials                 | Time |
|---|--------------------------|------|
| 1. Notified that activation of the assembly and accountability process and actions has been initiated by the SM/SED or designee.  |                          |      |
| 2. <b>CONTROL</b> and <b>RESTRICT</b> access to the Protected Area, except for those individuals designated for emergency response, per the Emergency Access List or as authorized for emergency response by the Shift Manager/Site Emergency Director. | <input type="checkbox"/> |      |
| 3. <b>ESTABLISH</b> Owner Controlled Area road blocks and on-site traffic controls.   | <input type="checkbox"/> |      |
| 4. <b>NOTIFY...</b> RADCON at extension 7865 that, Owner Controlled Area road blocks and on-site traffic control actions are in progress.   | <input type="checkbox"/> |      |

AND

**REQUEST...** RADCON dispatch personnel to the Owner Controlled Area road blocks if determined by RADCON that survey conditions requiring vehicle survey exist.

- |  |                          |  |
|--|--------------------------|--|
| 5. <b>CONTROL</b> and <b>RESTRICT</b> access to the Owner Controlled Area, except for those individuals designated for emergency response, per the Emergency Access List or as authorized for emergency response by the Shift Manager/Site Emergency Director. | <input type="checkbox"/> |  |
| 6. <b>DISPATCH</b> officer(s) to search areas within the Owner Controlled Area outside the Protected Area.   | <input type="checkbox"/> |  |
| A. IF... Visitors, contractors/construction personnel, and other persons in public access areas on or passing within the Owner Controlled Area and not assigned a designated assembly areas are located;   | <input type="checkbox"/> |  |

THEN... NS will:

- Warn and advise individuals of current actions to conduct assembly and accountability.
- Advise individuals on exits routes and request that they immediately exit the Owner Controlled Area.

APPENDIX D  
Page 2 of 3

**NUCLEAR SECURITY - ASSEMBLY AND ACCOUNTABILITY ACTIONS**

- B. IF... Visitors, contractors/construction personnel, and other persons in public access areas on or passing within the Owner Controlled Area and assigned a designated assembly areas are located;

THEN... NS will:

- Warn and advise individuals of current actions to conduct assembly and accountability.
- Advise personnel to report immediately to their designated assembly area.

- C. IF... Employees having emergency response assignments are located

THEN... NS will:

- Warn and advise individuals of current actions to conduct assembly and accountability,
- Advise personnel to report immediately to their designated emergency response center.

- D. IF... Employees not having emergency response assignments are located

THEN... NS will:

- Warn and advise individuals of current actions to conduct assembly and accountability.
- Advise personnel to report immediately to the nearest designated assembly area. See Appendix A.

7. **REPORT** the results of accountability to the SM/SED within 30 minutes after the assembly and accountability sirens have sounded. \_\_\_\_\_  
Initials Time

8. Unaccounted Individuals

IF... Individuals remain unaccounted, 45 minutes following the activation of the assembly and accountability sirens,

THEN...**REQUEST** permission from the SM/SED to form security search teams to locate the missing individual(s),

AND

**NOTIFY** RADCON and request that they accompany all security search teams.

**NUCLEAR SECURITY - ASSEMBLY AND ACCOUNTABILITY ACTIONS**

9. Two Person (Line of Sight) Rule, Public Address Announcement

A. WHEN...Assembly and Accountability have been completed,

AND

Nuclear Security has determined that the Two Person (Line of Sight) Rule is required.

THEN...**REQUEST** permission from the SM/SED to make the following Public Address Announcement:

\_\_\_\_\_  
Initials Time

"Attention all personnel. A credible insider threat exists. Effective immediately, all personnel entering the Vital Areas must observe the 2-person rule. This rule requires that all persons in a vital area must remain in visual contact (i.e. line of sight) with one another unless personnel or plant safety would be adversely impacted. This does not require that the two persons possess similar skills or knowledge. I repeat. The 2-person rule is being implemented immediately."

(REPEAT)

APPENDIX E  
Page 1 of 1

**RADIOLOGICAL CONTROL - ASSEMBLY AND ACCOUNTABILITY ACTIONS**

The following Appendix shall be utilized by the TSC Radiological Control Manager or if he is unavailable the Radiological Control Shift Supervisor or designee, for the purpose of conducting a site assembly and accountability actions.

- |    |  |          |                          |
|----|--|----------|--------------------------|
| 1. | Notified that activation of the assembly and accountability process and actions has been initiated by the SM/SED or designee.  | _____    | _____                    |
|    |  | Initials | Time                     |
| 2. | IF... Radiological conditions require,   |          | <input type="checkbox"/> |
|    | THEN... <b>ESTABLISH</b> a survey routine for all assembly areas, including the Emergency Centers.   |          |                          |
| 3. | IF... Radiological conditions in any assembly area(s) meet or exceed the listed guidelines:  |          | <input type="checkbox"/> |
|    | <ul style="list-style-type: none"> <li>• Radiation levels that would result in a radiation dose of 100 mrem in one hour, or</li> <li>• airborne radioactivity above 10CFR 20.1201 DAC limits.</li> </ul> |          |                          |
|    | THEN... <b>NOTIFY</b> the SM/SED and recommend that the personnel within the affected area be re-located to another assembly area or evacuated from the site.  |          |                          |
| 4. | WHEN... Notified by Nuclear Security that Owner Controlled Area Roadblocks have been established,  | _____    | _____                    |
|    | THEN... <b>EVALUATE</b> radiological conditions to determine if a RADCON survey checkpoint at the Owner Controlled Area road block should be established.  |          |                          |
| 5. | IF... Radiological conditions require that a RADCON survey checkpoint be established,  |          | <input type="checkbox"/> |
|    | THEN... <b>DISPATCH</b> RADCON personnel to the Owner Controlled Area road block.  |          |                          |
|    | AND  |          |                          |
|    | <b>ESTABLISH</b> a RADCON survey checkpoint.   |          |                          |
| 6. | WHEN... Notified by Nuclear Security that assembly and accountability search teams are required.   |          | <input type="checkbox"/> |
|    | THEN... <b>DISPATCH</b> RADCON personnel to assist security search teams.  |          |                          |

**SHIFT MANAGER/SITE EMERGENCY DIRECTOR - EVACUATION ACTIONS**

The following appendix shall be utilized by the Shift Manager/Site Emergency Director or designee for the purpose of conducting a evacuation of site non-emergency response personnel.

- |  | Initials                 | Time |
|--|--------------------------|------|
| 1. Conditions have been met that require an order to evacuate site non-emergency response personnel.   |                          |      |
| 2. Assembly and accountability has been completed.   | <input type="checkbox"/> |      |
| 3. <b>NOTIFY...</b> Nuclear Security (NS) at extension 3238 or 2219 that:  | <input type="checkbox"/> |      |
| A. An order to evacuate site non-emergency response personnel has been issued.   |                          |      |
| AND  |                          |      |
| B. NS Should implement EPIP-8, Appendix G.   |                          |      |
| 4. <b>NOTIFY...</b> Radiological Control at extension 7865 that:   | <input type="checkbox"/> |      |
| A. An order to evacuate site non-emergency response personnel has been issued,   |                          |      |
| AND  |                          |      |
| B. RADCON should implement EPIP-8, Appendix H.   |                          |      |
| 5. <b>NOTIFY...</b> Central Emergency Control Center (CECC) Director either by the direct ring-down telephone in the TSC or at extension 751-1614, | <input type="checkbox"/> |      |
| OR   |                          |      |
| If the CECC Director can not be reached, Operations Duty Specialist (ODS) at extension 751-1700 that:  |                          |      |
| A. An order to evacuate site non-emergency response personnel has been issued,   |                          |      |
| AND  |                          |      |
| B. BFN EPIP-8 is currently being implemented for evacuation of site non-emergency response personnel.  |                          |      |



APPENDIX G  
Page 1 of 3

**NUCLEAR SECURITY - EVACUATION ACTIONS**

The following appendix shall be utilized by the TSC Security Manager or if unavailable the Security Shift Supervisor or designee for the purpose of conducting a evacuation of site non-emergency response personnel.

- |   | Initials                 | Time |
|---|--------------------------|------|
| 1. Notified that an order to evacuate site non-emergency response personnel has been initiated by the SM /SED.  |                          |      |
| 2. <b>CONTINUE</b> to control and restrict access to the Plant Protected Area, except for those individuals designated for emergency response, per the Emergency Access List or as authorized for emergency response by the Shift Manager/Site Emergency Director.  | <input type="checkbox"/> |      |
| 3. <b>CONTINUE</b> to maintain Owner Controlled Area road blocks and on-site traffic controls.  | <input type="checkbox"/> |      |
| 4. <b>CONTINUE</b> to control and restrict access to the Owner Controlled Area, except for those individuals designated for emergency response, per the Emergency Access List or as authorized for emergency response by the Shift Manager/Site Emergency Director. | <input type="checkbox"/> |      |
| 5. <b>NOTIFY...</b> RADCON at extension 7865 that, Owner Controlled Area road blocks and on-site traffic control actions are in progress,   | <input type="checkbox"/> |      |

AND

**REQUEST...** RADCON dispatch personnel to the Owner Controlled Area road blocks if it is determined by RADCON that conditions requiring vehicle survey exist.

- |   | Initials | Time |
|---|----------|------|
| 6. <b>EVALUATE</b> evacuation route:  |          |      |
| A. Consult with RADCON information concerning off-site environmental radiological hazards (potential plume pathways). |          |      |
| B. Consider local weather information to determine if hazardous weather conditions exist.                             |          |      |
| C. Consider, all information concerning terrorist activity within a 10 mile radius of the site.                       |          |      |

APPENDIX G  
Page 2 of 3

**NUCLEAR SECURITY - EVACUATION ACTIONS**

7. **DETERMINE** evacuation route based upon information obtained in step 6 of this appendix:
- Shaw Road (North) only,
  - Nuclear Plant Road (East) only,
  - Either Shaw Road or Nuclear Plant Road.

8. **VERIFY** that all prior listed items are complete before continuing in this action list.

**NOTE**

The order in which assembly areas are evacuated is at the discretion of Nuclear Security. The list of assembly areas is not intended to suggest a order for completion.

**NOTE**

Brief and advise all individuals in assembly areas of:

- Current actions to conduct an evacuation of all non-emergency response personnel,

**AND**

- Recommended exits routes, directing all personnel to follow the instructions of local law enforcement officers upon leaving the Owner Controlled Area.

9. **DISPATCH** Security personnel to evacuate the following assembly areas \_\_\_\_\_  
Initials    Time
- |                          |                                      |  |  |
|--------------------------|--------------------------------------|--|--|
| <input type="checkbox"/> | Administration Building,             |  |  |
| <input type="checkbox"/> | Common Maintenance Building          |  |  |
| <input type="checkbox"/> | BFN Training and Visitor Center      |  |  |
| <input type="checkbox"/> | Materials and Procurement Complex    |  |  |
| <input type="checkbox"/> | Modifications Fabrication Shop       |  |  |
| <input type="checkbox"/> | Modification Administration Building |  |  |
| <input type="checkbox"/> | Unit 1 Restart Services Building     |  |  |
| <input type="checkbox"/> | North Administration Building        |  |  |
| <input type="checkbox"/> | South Administration Building        |  |  |

APPENDIX G  
Page 3 of 3

**NUCLEAR SECURITY - EVACUATION ACTIONS**

10. **DISPATCH** Security personnel or utilize the public address system to evacuate the following assembly areas:

                       
Initials Time

- Plant Maintenance Building 1<sup>st</sup> Floor (Locker Area)
- Plant Maintenance Building 1<sup>st</sup> Floor
- Plant Maintenance Building 2<sup>nd</sup> Floor
- Fire Operations Building
- Plant Manager's Office Foyer Area,

11. **NOTIFY** the Shift Manager/Site Emergency Director upon completion of evacuation site non-emergency response personnel.

                       
Initials Time

**RADIOLOGICAL CONTROL - EVACUATION ACTIONS**

The following appendix shall be utilized by the TSC Radiological Control Manager, or if he is unavailable the Radiological Control Shift Supervisor or designee, for the purpose of conducting a evacuation of site non-emergency response personnel.

1. Notified of order to evacuate site non-emergency response personnel has been initiated by the SM /SED. \_\_\_\_\_  
Initials Time

2. IF... a radiological survey checkpoint has not been established at the Owner Controlled Area Roadblock, then:

THEN... **DISPATCH** RADCON personnel to the Owner Controlled Area road block .

AND

**ESTABLISH** a RADCON survey checkpoint.

3. IF... Radiological concerns merit the activation of the off-site decontamination facility, \_\_\_\_\_  
Initials Time

THEN... Implement EPIP-14, Step 3.8, Activation of the Browns Ferry Alternate Personnel Decontamination Facility.



**TENNESSEE VALLEY AUTHORITY**

**BROWNS FERRY NUCLEAR PLANT**

**EMERGENCY PLAN IMPLEMENTING PROCEDURE**

**EPIP-10**

**MEDICAL EMERGENCY PROCEDURE**

**REVISION 24**

PREPARED BY: T. W. CORNELIUS

PHONE: 2038

RESPONSIBLE ORGANIZATION: EMERGENCY PREPAREDNESS

APPROVED BY: JEFF LEWIS

DATE: 04/17/2003

EFFECTIVE DATE: 04/21/2003

**LEVEL OF USE: REFERENCE USE**

**QUALITY-RELATED**

## REVISION LOG

Procedure Number: EPIP-10

Revision Number 24

Pages Affected: 11, 12

Description of Change:

- IC 23            This revision is being conducted to update a telephone number and a reference for contacting a TVA Physician.  
Page 9 - Reference change for contacting the TVA Physician. Change from "refer to REND Section K" to "Contact Site Medical Office".  
Page 12 - Change cellular phone operator assistance number from "Cellular One - 9-1-800-333-4004" to "Verizon Wireless, 9-1-800-922-0204.
- IC 24            The revision is being conducted to support completion of Problem Evaluation Report 02-003140-000. The revision involves adding a checklist item for the Shift Manager to notify industrial safety of a fatality or catastrophic injury. The revision also implements recommendation 3 from the from Quality Assurance Audit SSA0206, by clarifying Medical Services involvement in responses.
- IC 25            This revision is being conducted to update Huntsville Hospital telephone number prefix changes and revise Attachment E updating driving instructions to Huntsville Hospital.

MEDICAL EMERGENCY PROCEDURE

**1.0 PURPOSE**

To provide timely response to medical emergencies at Browns Ferry.

**2.0 SCOPE**

This procedure applies to Medical Emergency response for both radioactively contaminated and non-radioactively contaminated injured individuals.

**3.0 INSTRUCTIONS**

**3.1 Initial Notification by Unit Operator**

**3.1.1** Upon receiving a Medical Emergency call, the Control Room Unit Operator will:

- Obtain Name of caller.
- Obtain Location of medical emergency.
- Obtain Type of medical emergency.
- Obtain Number of People involved.
- Obtain Telephone Number from caller.

**3.1.2** If not activated, activate the plant medical/fire alarm. Announce medical emergency location over the plant public address (PA) system, repeating at regular intervals to alert the Medical Emergency Response Team (MERT) to the location until instructed otherwise by Shift Manager or Unit Supervisor .

**3.1.3** Notify the Fire Protection Personnel using the Operations/Fire Protection Radio.

**3.1.4** Notify the Shift Manager of the emergency.

**3.1.4.1** The MERT consist of the following:

- Incident Commander (as defined in FPP)
- Medical/Fire Operation Personnel
- RADCON Personnel (if location of emergency is in a Radiological Controlled Area)
- Nuclear Security Personnel
- Medical Services (as requested)
- Level II Responders (as defined in FPP)



### 3.0 INSTRUCTIONS (CONTINUED)

#### 3.2 The Shift Manager will:

1. **Dispatch** Unit Supervisor or designee to the scene to act as Incident Commander.
2. **Establish and Maintain** communication with the Unit Supervisor .
3. **Notify** the nurse on duty (if requested by the MERT Leader).

#### 3.3 The Incident Commander will:

1. **Ensure** and **Maintain** the MERT Team's passage route.
2. **Ensure** that the Shift Manager is keep knowledgeable of the situation.
3. **Request** the Shift Manager to obtain ambulance as needed.
4. **Establish** radio communication with the Shift Manager.
5. **Ensure** that plant operations do not impose any hazardous conditions on the injured or Medical Response Team.

#### 3.4 The Medical/Fire Operations Personnel will:

1. **Provide** medical emergency supplies to the location of the emergency.
2. **Provide** emergency medical assistance to injured personnel.
3. **Transport** injured personnel as required.
4. **Communicate** applicable support recommendations to the Incident Commander.

#### 3.5 The Radiological Control Personnel will:

Assist the medical/fire operations team personnel concerning:

- Radiological Protection
- Radiological Protective measures
- Control of Contamination
- As requested

#### 3.6 The Nuclear Security Services Personnel will:

1. **Ensure** crowd control.
2. **Assist** the Incident Commander.

**3.0 INSTRUCTIONS (CONTINUED)**

**3.7 The Medical Services Personnel will when requested:**

**Respond to medical emergencies to support and assist the Incident Commander.**

**3.8 The Level II Responders will:**

1. **Report** to fire equipment cages in the Turbine Building elevation 557'.
2. **Establish** radio or telephone contact with the Incident Commander.
3. **Ensure** emergency equipment is ready for use.
4. **Direct** the movement of equipment to the emergency scene.

**3.9** All members of the Medical Emergency Response Team proceed to the scene upon hearing the announcement or as directed by the MERT Leader.

**3.10 Transport Offsite (If Required)**

**NOTE:** If patient is not contaminated/irradiated, transport to Athens-Limestone Hospital, unless otherwise directed. If patient is contaminated/irradiated, only transport to hospitals listed below:

- Decatur General Hospital (see Attachment D)
- Huntsville Hospital (see Attachment E)

**3.10.1** Shift Manager calls for an ambulance from outside ambulance service, if requested by MERT Leader or Incident Commander.

**NOTE:** See Attachment F for Medical Emergency telephone numbers.

**3.10.2** Shift Manager complete Attachment A and provide information to receiving hospital. Forward completed Attachment A to the REP Manager to be filed.

**3.10.3** Attachments D, and E give directions to various hospitals.

**3.0 INSTRUCTIONS (CONTINUED)**

**3.11** If contamination/irradiation is suspected, RADCON personnel will accompany ambulance, and furnish radiological services as requested.

**3.12 Follow-Up**

**3.12.1** EMT/RADCON makes follow-up call to hospital from the ambulance to give/receive additional information concerning patient's condition and estimated time of arrival.

**3.12.2** Shift Manager is responsible for any further notifications per EPIP-2 through EPIP-5.

**3.13 TVA Notification**

**3.13.1** The Shift Manager, should notify BFN Industrial Safety, if someone is ill or injured to the extent they require ambulance transportation to a hospital or if the medical emergency has resulted in a fatality or catastrophic injury (.i.e. three (3) or more hospitalized).

**3.13.2** RADCON should notify the TVA Physician Representative (refer to the REND, Section K) any time TVA personnel are suspected of receiving radiation exposure in excess of the recommended TVA occupational exposure limits.

**3.13.3** Notify the Operations Duty Specialist (751-1700) of all offsite ambulance responses, regardless of emergency or non-emergency requests.

**4.0 ATTACHMENTS**

Attachment A - Medical Emergency Notification Form (SHIFT MANAGER)

Attachment B - Patient Care Guidelines

Attachment C - Procedure for Cytogenetics Blood Studies By REAC/TS

Attachment D - Typical Layout of Decatur General Hospital

Attachment E - Typical Layout of Huntsville Hospital

Attachment F - Medical Emergency Telephone Numbers

ATTACHMENT A  
(Page 1 of 1)  
MEDICAL EMERGENCY NOTIFICATION FORM

Reported By (Shift Manager / Unit Supervisor) \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_

Time of Injury: \_\_\_\_\_

Hospital: \_\_\_\_\_

Individual Contacted: \_\_\_\_\_

Time Contacted: \_\_\_\_\_

Total number of Victims: \_\_\_\_\_

Victim(s) Name	Condition	Type of Injury
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The Victim(s) is: (Check all that apply, or list the number of victims for each)

- Not a Radiation Accident Victim
- Potentially Contaminated (Survey incomplete due to injuries)
- Contaminated with radioactive material
- Irradiated (over-exposed) whole body dose is \_\_\_\_\_ Rem

If Contaminated, are levels known at this time?  Yes  No

• If yes, provide the following information:

1. Level of Contamination \_\_\_\_\_ (CPM) or (MRAD/Hr) - Circle one
2. Type of Contamination  Alpha,  Beta, or  Beta/Gamma

Is Internal Contamination Expected?  Yes  No

• If yes: By  Inhalation,  Open Wounds,  Ingestion, or  Other

Isotopes:

- Isotopes are unknown at this time.
- Isotopes are known and are as follows:

\_\_\_\_\_  
\_\_\_\_\_

Estimated Time of Arrival, (If Known) ETA = \_\_\_\_\_

### Operations Duty Specialist Notification

Notify the Operations Duty Specialist (751-1700) of all offsite ambulance responses, regardless of emergency or non-emergency requests.

### Industrial Safety Notification

If the medical emergency has resulted in either an ambulance transportation to a hospital, or a fatality or catastrophic injury (i.e. three (3) or more hospitalized), then notify Industrial Safety, if on duty, at extension 7839. If Industrial Safety is not on duty then notify the Operations Duty Specialist and request the "On-Call" Industrial Safety representative be contacted and informed of medical emergency.

ATTACHMENT B

(Page 1 of 3)

PATIENT CARE GUIDELINES

**1.0 GENERAL**

- 1.1 First aid and emergency medical care should be provided for onsite to preserve life and to minimize injury and suffering.
- 1.2 The Medical Emergency Response Team (MERT) will take appropriate action as directed by the Team Leader.
- 1.3 If requested, the nurse should assist from outside any contamination zone unless the medical condition of the patient necessitates her/his presence.
- 1.4 As applicable a doctor should be consulted when further professional attention is needed.
- 1.5 The care of persons known or suspected to be associated with radiation exposure or contamination will be coordinated with the RADCON representative. The essential aims of the MERT-RADCON team are:
  - a. Minimize the injury and further radiation exposure to the victim.
  - b. Protect attending personnel from excessive and unnecessary radiation exposure.
  - c. Control spread of radioactivity contamination.
  - d. Assess and document the patient's radiological exposure.
  - e. Immediate lifesaving and disability limiting procedures will take precedence over noncritical decontamination and dosimetry assessment procedures.
- 1.6 Coordinate, the care, disposition, and reporting of all injuries known or suspected to be associated with excess levels of radiation exposure or contamination with the CECC, when staffed.

**2.0 NONCONTAMINATED - NONIRRADIATED**

When it is known that the patient is not contaminated and has not been overexposed to radiation, advise the patient, ambulance crew, receiving hospital, and attending physician of the absence of Radiological Complications.

ATTACHMENT B  
(Page 2 of 3)  
PATIENT CARE GUIDELINES

**3.0 IRRADIATED-NONCONTAMINATED**

- 3.1 Remove the victim from further exposure providing only essential first aid in the process, then direct attention to medical care of other physical injuries.
- 3.2 Medical care of the radiation exposure is governed by the medical status of the patient and the findings of the RADCON representative. The treatment of illness or physical injury takes precedence over treatment for radiation exposure.
- 3.3 Individuals who have received an acute total body radiation exposure greater than 5 Rem should have hematological studies performed to detect chromosomal aberrations or other changes in blood constituent. REACTS can provide this service and should be contacted by the attending physician.
- 3.4 Advise all involved personnel of radiological conditions.

**4.0 CONTAMINATED PATIENTS**

- 4.1 The patient should be given initial emergency care by the medical emergency response team. 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 Huntsville Hospital or Decatur General Hospital. Every reasonable effort should be made to reduce the radioactive contamination level to less than 0.5 rem 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. In cases of less severe injuries, the patient will be sent to the personnel decontamination facility in the service building (or radwaste building, if stretcher bound) treated in the emergency treatment area or transferred to Huntsville Hospital or Decatur General Hospital.

ATTACHMENT B  
(Page 3 of 3)  
PATIENT CARE GUIDELINES

4.0 CONTAMINATED PATIENTS (Continued)

- 4.2 The RADCON representative will collect, identify, label, and analyze all biological specimens as required and deemed necessary. He will obtain the injured person's personal dosimetry and replace with equivalent dosimetry if appropriate.
- 4.3 The RADCON group will control contamination during transportation to the receiving hospital.
- 4.4 Advise all involved personnel of Radiological conditions.

ATTACHMENT C  
PROCEDURE FOR CYTOGENETICS BLOOD STUDIES BY REAC/TS

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 whole-body 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 CYTOGENETIC BLOOD STUDIES:**

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

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

**TO REQUEST KIT:** Attending physician should contact:  
REAC/TS, attention Cytogenetics Laboratory

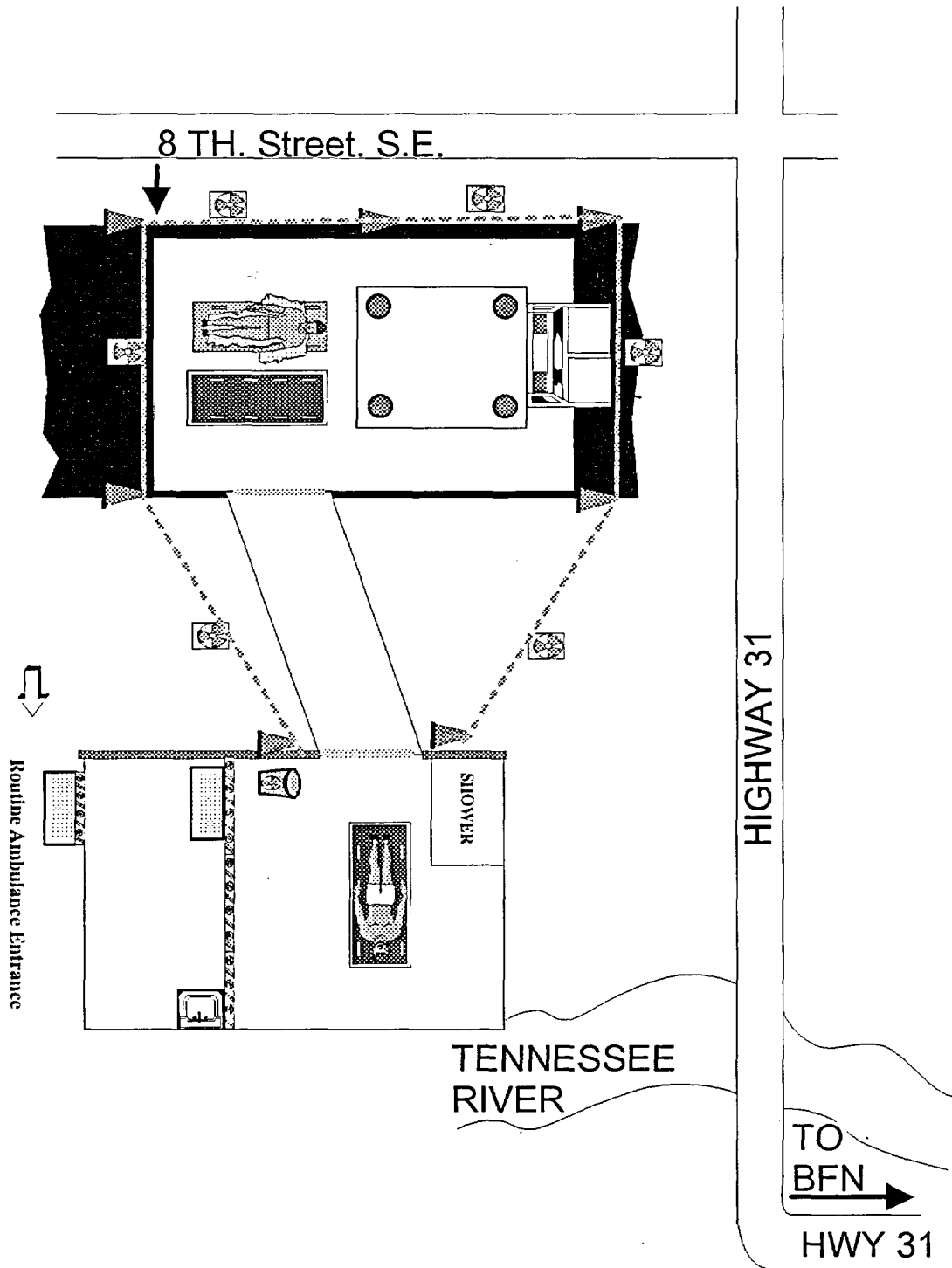
**COORDINATE RESULTS WITH:**

TVA Physician Representative  
(Contact Site Medical Office)

**SHIPMENT:** Refer to instruction sheet in REAC/TS kit. Kit is designed as return shipping container, complete with chemical ice pack. REAC/TS recommends air shipment; however, undelayed method of shipment by TVA services may be considered if coordinated with REAC/TS.



ATTACHMENT D  
(Page 1 of 1)  
Typical Layout of Decatur Hospital

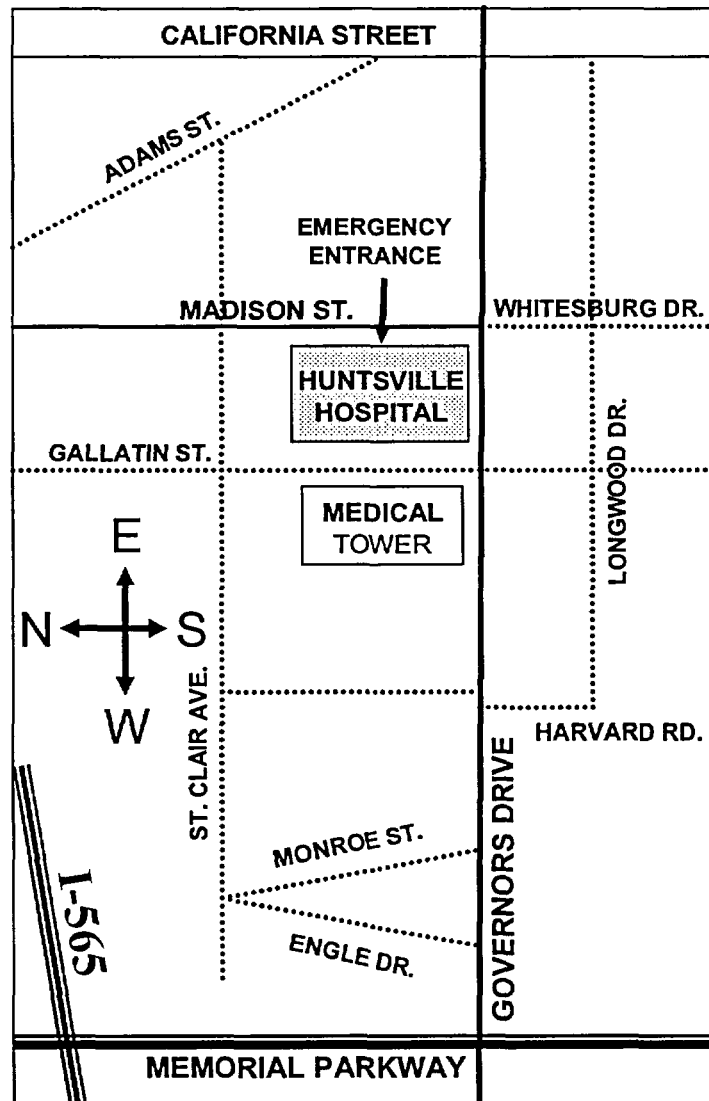


## ATTACHMENT E

(Page 1 of 1)

### Typical Layout of Huntsville Hospital Driving Directions to Huntsville Hospital

- Proceed east on Nuclear Plant Road to Hwy. 31
- Turn south onto Hwy 31 and proceed to Alt. 72/Hwy 20, just south of Calhoun Community College
- Proceed east on Alt. 72/Interstate 565 towards Huntsville
- Exit east onto Governors Drive
- Proceed on Governors Drive to Madison Street/Whitesburg Dr.
- Turn left onto Madison Street
- Emergency ambulance entrance on left



ATTACHMENT F  
(Page 1 of 1)  
MEDICAL EMERGENCY TELEPHONE NUMBERS

**BROWNS FERRY**

- Medical Station 4747, 2700
- TVA Emergency Services/Ambulance Rescue 3313, 2491

**LOCAL AMBULANCE SERVICE**

- Athens-Limestone Hospital Ambulance Service 9-232-2525  
Athens, Alabama 9-233-9159

**HEAR SYSTEM FREQUENCY**

155.340MHz

**HOSPITALS**

- Athens - Limestone Hospital 9-233-9155  
Athens, Alabama 9-233-9151
- Decatur General Hospital 9-1-256-341-2174  
Decatur, Alabama 9-1-256-341-2175  
(Use only if other numbers are busy) 9-1-256-341-2000
- Huntsville, Hospital 9-1-256-265-8137  
Huntsville, Alabama 9-1-256-265-8139  
(Use only if other numbers are busy) 9-1-256-265-8020

**REACTS OAK RIDGE, TENNESSEE**

- Day Shift (8 a.m. - 4:30 p.m.) 9-1-865-576-3131
- After Hours 9-1-865-576-1005  
Ask for REACTS

**TVA-BFN-EMERGENCY VEHICLE CELLULAR PHONES**

- Huntsville Area Roamer Access 9-1-256-656-7626
- "Verizon Wireless" Assistance Operator 9-1-800-922-0204
- BFN-Ambulance Cellular Phone 9-1-256-656-0137
- BFN-REP Truck #5 9-1-256-508-4872
- BFN-REP Truck #6 9-1-256-656-9623

LAST PAGE