



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

AUG 02 2002

10 CFR 50, App E.

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

Gentlemen:

In the Matter of  
Tennessee Valley Authority

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Docket No. 50-390

WATTS BAR NUCLEAR PLANT (WBN) - EMERGENCY PLAN IMPLEMENTING  
PROCEDURE (EPIP) REVISION

In accordance with the requirements of 10 CFR Part 50, Appendix E,  
Section V, the enclosure provides the EPIPs as listed below.

<u>EPIP</u>	<u>Rev</u>	<u>Title</u>	<u>Effective Date</u>
EPIP-1	20	Emergency Plan Classification Flowchart	7-9-2002
EPIP-2	19	Notification Of Unusual Event	7-30-2002
EPIP-3	22	Alert	7-30-2002
EPIP-4	23	Site Area Emergency	7-30-2002
EPIP-5	24	General Emergency	7-30-2002
EPIP-8	17	Personnel Accountability And Evacuation	7-30-2002
EPIP-11	10	Security and Access Control	7-30-2002

Filing instructions are included with this document.

A045

U.S. Nuclear Regulatory Commission  
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**AUG 02 2002**

There are no regulatory commitments in this letter. If you should have any questions, please contact me at (423) 365-1824.

Sincerely,



P. L. Pace  
Manager, Licensing and Industry Affairs

Enclosure

cc (Enclosure):

NRC Resident Inspector (w/o Enclosure)  
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U.S. Nuclear Regulatory Commission (2 copies)  
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## FILING INSTRUCTIONS

DOCUMENT NUMBER EPIP - 1

REMOVE REVISION 20 INSERT REVISION 20

Comments Redistribute - all copies should be  
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not duplexed

**TENNESSEE VALLEY AUTHORITY**

**WATTS BAR NUCLEAR PLANT**

**EMERGENCY PLAN IMPLEMENTATING  
PROCEDURES**

**EPIP-1**

**EMERGENCY PLAN CLASSIFICATION FLOWCHART**

Revision 20

Unit 0

**NON-QUALITY RELATED**

PREPARED BY: B. F. McNew  
(Type Name)

SPONSORING ORGANIZATION: Emergency Planning

APPROVED BY: Frank L. Pavlechko

EFFECTIVE DATE: 7/9/2002

LEVEL OF USE: REFERENCE

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### REVISION LOG

Revision Number	Implementation Date	Description of Revision	
0	04/13/90	New WBN-EPIP. Supersedes IP-1.	
1	02/04/91	Revised to separate RCS leak and identified S/G tube leak initiating conditions. Clarified initiating condition in fire. Updated ODS telephone numbers.	
2	11/28/91	Add initiation conditions. Clarify reference to Attachment 1 Definitions. Define Protected Area, Owner Controlled Area, and Vital Areas throughout procedures. Clarify NOUE declaration for Uncontrolled Shutdown.	
3	03/04/92	Change all Technical Specification references to reflect new "Merit" Tech Specs and ODCM references.	
4	02/10/93	Procedure revised to reflect the new methodology for development of Emergency Action Levels per: NUMARC/NESP-007, Rev. 3, 1/92, endorsed by REG GUIDE 1.101 Emergency Planning and Preparedness For Nuclear Power Reactors Rev. 3, 8/92.	
5	09/15/93	Editorial (non-intent) and formal changes. Text changes made to EALs to meet review comments identified by the NRC.	
6	01/01/94	Procedure revised to reflect new 10 CFR 20 changes.	
7	05/27/94	Procedure revised to reflect changes to System 90 (Radmonitoring) and establish site perimeter monitoring points.	
8	01/10/95	FPBM, EAL 1.3.4, CNTMT, Bypass, Loss (1), revised to eliminate potential for misclassification. Maps revised to reference north and wind direction. Table 7-2, Alert, Radiation Levels enhanced to provide Operators additional information.	
9	4/28/98	Revised Revision Log to include page numbers. References added to the document. Fission Product Barrier Matrix revised to reflect information found in the EOP Set Point Verification Document (WBN-OS64-188). Reference to AOI-27 revised to AOI-30.2. Phone numbers to the National Weather Service changed due to their reorganization. Annunciator window references for the earthquake corrected to match Main Control Room alignment. All references to RM were changed to RE to make it consistent with site description documents. Tables in section seven revised to reflect the following: System 90 changes, monitor efficiencies, default flow rates, release time durations, and annual meteorological data enhancements.	
Revision Number	Implementation Date	Pages Affected	Description of Revision
CN-1	09/28/95	10, 14, 26	The following non-intent enhancements were made: (CCP) Acronym added to the Fission Product Barrier Matrix in 1.2 RCS Barrier, (2. RCS Leakage LOCA), to enhance description. New SI reference number for Reactor Coolant System Water Inventory Balance identified in event 2.5 (RCS Unidentified Leakage) and 2.6 (RCS Identified Leakage). Area code and phone number in event 5.2 (Tornado) revised to new number.
CN-2	11/10/95	3, 6, 34	The following non-intent enhancements were made: Corresponding ERFDS system identifiers were added next to the rad monitors on Table 7-1; Table 7-1 was realigned to improve its usability; an enhanced description for RE-404 was provided in Note 3 of Table 7-1; the ERFDS Operators Manual was added to the Reference section.

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### REVISION LOG(Continued)

Revision Number	Implementation Date	Pages Affected	Description of Revision
CN-3	05/24/96	8, 11, 16, 19, 23, 24, 26, 29, 32, 34	The following non-intent enhancements were made: Due to revisions made to AOI-27, it was added back to the EALs in event 4.5 "Control Room Evacuation"; The Assessment Method on Table 7-1 was enhanced to correspond with the note at the top of the table. In addition, the reference to TI-30 was removed since this procedure will be terminated due to the enhancements being made to EPIP-16 and ERFDS. The word Projectile was added to the index and title reference to event 5.3 "Aircraft/Projectile Crash", to make it consistent with the EALs within it's classification.
10	3/15/99	All	The following non-intent enhancement were made: Software revised to Microsoft Word which re-formatted pages along with other enhancements; minor typographical errors corrected; two references revised - one added; SOS/ASOS replaced with SM/US; index page, effluent added to gaseous; vital area definition enhanced; spent fuel pit revised to pool on Table 7-2; SP revised to EAB in Event 7.1; TVA Load Dispatcher/Water Resources revised to River Systems Operations and revised ERFDS/P-2500 to ICS.
11	4/15/99	2, 34	Non intent change. Typo corrected. Changed >1.0 to >0.1.
11A	7/1/99	3,26	Corrected typo on phone number The remaining pages of this procedure are Rev 11 only page 3, and the fold out page for 26 have been changed.
12	9/30/99	All	Non intent change. Minor editorial/format changes made. Typographical errors corrected. Seismic windows revised to reflect DCN-50007 per ERPI Report 6695. (LTL) Lower toxicity limit replaced with (PEL) Permissible Exposure Limit. This revision is also part of the resolution to PER 99-009326-000.
13	12/08/99	All	Non-intent change. Revised page 33 for resolution of PER 99-015478-000. Minor editorial change to Event 5.1 step 1 of the Alert classification.
14	04/10/00	All (Pg.4 & 45)	Non-intend change. Revised page 45 for DCN 50484, stage 1 which moved 0-RE-90-101B, & -132B from ICS Screen 4RM2 to 4RM1. DCN also moved 1-RE-90-421B thru -424B and 0-RE-90-120 & -121 from ICS Screen 4RM1 to 4RM2. This revision allows all liquid radiation monitors to be observable on one ICS screen and all gaseous radiation monitors to be observed on a separate ICS screen.
15	08/17/00	All (Pg. 4, 11A & B)	Intent change. Revised CNTMT Rad Monitors (1-RE-90-271, 272, 273, & 274) readings to correspond with the new TI-RPS-162, "Response of the Primary Containment High Range Monitors" readings (Reference EDC-50600). This analysis resulted in a revision to the EALs 1.1.5 on the Barrier matrix page, 11b. This revision resolves action items from CORP PER 99-000038-000. This revision was also determined not to reduce the level of effectiveness of the procedure or REP.

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### REVISION LOG (Continued)

Revision Number	Implementation Date	Pages Affected	Description of Revision
16	3/30/01	All (Pg. 11 & 14)	Plan effectiveness determinations reviews indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Revised CNTMT Rad Monitors readings in the Barrier Matrix (1.3) to support new dose assessment methodology. Non intent change. Revised reference from annunciator alarm printer to annunciator monitor per DCN D-50301.
17	09/25//01	All Page 6, 11B	Plan effectiveness determinations reviews indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Procedure revised to Non-Quality related per requirements of NQAP & pending revision to SPP-2.2. The coversheet and records section of the procedure was revised to reflect this change. Non-Intent change. Corrected typo on Barrier Matrix.
18	02/15/02	All 2, 11B, 44	Plan effectiveness determinations reviews indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Changes to the EALs in this revision consist of changing $\beta$ - $\gamma$ to gamma in Section 7.0 to ensure consistency with NUMARC/NESP-007, Reg Guide 1.101, and NEI 99-01 rev 4. Clarification to EAL 1.3.3 (containment isolation status also made per this reference.) This standardizes these issues with the other TVAN sites. These changes were approved by the State of Tennessee.
19	06/05/02	All 4, 7 & 30	Plan effectiveness determinations on these change(s) indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent change(s): A revision to the Security Event (4.6) was made to incorporate change(s) resulting from the NEI to NRC (Mr. Bruce Boger) letter dated 12/18/01 requesting conformation for an EAL basis change to include response to a Credible Site Specific Threat. Table 4-3 was revised to incorporate this additional EAL. This meets the compliance of the NRC's 10/6/01 Safeguards Advisory on this matter. This represents an additional EAL and does not change existing criteria in the Security Event Basis. Revised 5.1 Interfacing documents by noting the termination of EPIP 9 with reference to EPIP 16.
20	07/09/02	ALL, pg. 2, 10, 13, 15, 20, 24, 30, 32, 39, 43	Plan effectiveness determinations on these change(s) indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent change(s): Reference to T/S 3.4.16 in Event 2.4 EAL 1(a) revised to correspond to levels in AOI-28. Credible Site-Specific was added to the definition pages. Removed reference to the definition in Table 4-3 SECURITY EVENTS to standardize with other TVAN sites.

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## 1.0 PURPOSE<sup>4</sup>

This Procedure provides guidance in determining the classification and declaration of an emergency based on plant conditions.

## 2.0 RESPONSIBILITY<sup>2,4</sup>

The responsibility of declaring an Emergency based on the guidance within this procedure belongs to the Shift Manager/Site Emergency Director (SM/SED) or designated Unit Supervisor (US) when acting as the SM or the TSC Site Emergency Director (SED). These duties CAN NOT be delegated.

## 3.0 INSTRUCTIONS<sup>4</sup>

- 3.1 The criteria in WBN EPIP-1 are given for GUIDANCE ONLY: knowledge of actual plant conditions or the extent of the emergency may require that additional steps be taken. In all cases, this logic procedure should be combined with the sound judgment of the SM/SED and/or the TSC SED to arrive at a classification for a particular set of circumstances.
- 3.2 The Nuclear Power (NP) Radiological Emergency Plan (REP) will be activated when any one of the conditions listed in this logic is detected.
- 3.3 Classification Determination
  - 3.3.1 To determine the classification of the emergency, review the Initiating Conditions of the Events described in this procedure with the known or suspected conditions and CARRY OUT the notifications and actions referenced.
  - 3.3.2 If a Critical Safety Function (CSF) is listed as an Initiating Condition: the respective status tree criteria will be monitored and used to determine the Event classification for the modes listed on the classification flowchart.
  - 3.3.3 The highest classification for which an Emergency Action level (EAL) currently exists shall be declared.



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### 3.0 INSTRUCTIONS (continued)

- 3.3.4 After an Event classification, if the following investigation shows that Initiating Conditions were met that dictate a higher Event classification, the new event classification shall be declared at the clock time of the determination.
- 3.3.5 **IF** an EAL for a higher classification was exceeded but the present situation indicates a lower classification, the fact that the higher classification occurred **SHALL** be reported to the NRC and Central Emergency Control Center (CECC), but should not be declared.
- 3.3.6 **IF** the Parameter is indeterminate due to instrument malfunction and the existence of the condition **CAN NOT** be reasonably discounted (i.e., spurious or false alarm that can be substantiated within 15 minutes) the condition is considered **MET** and the SM/SED **SHALL** follow the indications provided until such time as the alarm is verified to be false.
- 3.3.7 **IF** an EAL was exceeded, but the emergency has been totally resolved (prior to declaration), the emergency condition that was appropriate **shall not** be declared but reported to the NRC and Operations Duty Specialist (ODS) at the same clock time.
- 3.3.8 The **ACCEPTABLE** time frame for notification to the Operation Duty Specialist (ODS) is considered to be five (5) minutes. This is the time period between declaration of the emergency and notifying the ODS.

### 4.0 RECORDS

#### 4.1 Non-QA Records

None

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## 5.0 REFERENCES

### 5.1 Interfacing References

BP-236, *Event Critique and Root Cause Analysis*

SPP 3.5, *Regulatory Reporting Requirements*

WBN-EPIP-2, *Unusual Event*

WBN-EPIP-3, *Alert*

WBN-EPIP-4, *Site Area Emergency*

WBN-EPIP-5, *General Emergency*

WBN-EPIP-9, *Loss of Meteorological Data (Canceled see EPIP-16)*

WBN-EPIP-13, *Termination of the Emergency and Recovery*

WBN-EPIP-14, *Radiological Control Response*

WBN-EPIP-16, *Initial Dose Assessment For Radiological Emergencies*

CECC-EPIP-9, *Emergency Environmental Radiological Monitoring Procedures*

SI-4.04, *Measurement of Identified and Unidentified Leakage of the Reactor Coolant System*

### 5.2 Other Documents

10 CFR 50, *Domestic Licensing of Production and Utilization Facilities*

10 CFR 20, *Standards for Protection From Radiation*

REG GUIDE-1.101, *Emergency Planning and Preparedness For Nuclear Power Reactors endorsing NUMARC NESP-007 Methodology for Development of Emergency Action Levels.*

Site Technical Specifications (Tech Specs), Abnormal Operating Instructions (AOIs), Emergency Operating Procedures (EOPs), Set Point Verification documents, Chemistry Technical documents (CTDs), and the Final Safety Analysis Report (FSAR) are also referenced in Appendix C of the Radiological Emergency Plan.

ICS Operator's Manual

EPPOS #2, "NRC EP Position on Timeliness of Classification of Emergency Conditions

EPRI Report 6695 Guidelines for Nuclear Power Plant Response to Earthquakes.

EMERGENCY  
PLAN  
CLASSIFICATION  
FLOWCHART <sup>1,3,4,5</sup>

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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

1

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

2

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## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

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## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

4

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## DESTRUCTIVE PHENOMENON

- |                         |                      |
|-------------------------|----------------------|
| 5.1 Earthquake          | 5.4 River Level High |
| 5.2 Tornado             | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile | 5.6 Watercraft Crash |
| Crash                   | Figure 5-A           |
| Table 5-1               |                      |

5

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

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## DEFINITIONS/ACRONYMS

**UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY and GENERAL EMERGENCY:** (see SED Judgment 4.7).

**BOMB:** An explosive device (See EXPLOSION).

**CIVIL DISTURBANCE:** A group of twenty (20) or more persons violently protesting station operations or activities at the site

**CREDIBLE SITE-SPECIFIC** -The determination is made by WBN senior plant management through use of information found in the Safeguards Contingency Plan.

**CRITICAL-SAFETY FUNCTION (CSFs):** A plant safety function required to prevent significant release of core radioactivity to the environment. There are six CSFs Sub-criticality, Core Cooling, Heat Sink, Pressurized Thermal Shock, Integrity (Containment) and Inventory (RCS)

**EVENT:** Assessment of an EVENT commences when recognition is made that one or more of the conditions associated with the event exist. Implicit in this definition is the need for timely assessment, i.e. within 15 minutes

**EXCLUSION AREA BOUNDARY (EAB):** The demarcation of the area surrounding the WBN units in which postulated FSAR accidents will not result in population doses exceeding the criteria of 10 CFR Part 100 Refer to Figure 7-A.

**EXPLOSION:** A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures required for safe operation

**EXTORTION:** An attempt to cause an action at the station by threat of force

**FAULTED:** (Steam Generator) Existence of secondary side leakage (i.e., steam or feed line break) that results in an uncontrolled decrease in steam generator pressure or the steam generator being completely depressurized

**FIRE:** Combustion characterized by heat and light. Source of smoke such as slipping drive belts or overheated electrical components do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed

**FLAMMABLE GAS:** Combustible gases maintained at concentrations less than the LOWER EXPLOSIVE LIMIT (LEL) will not explode due to ignition

**HOSTAGE:** A person(s) held as leverage against the station to ensure that demands will be met by the station

**INEFFECTIVE:** The specified restoration action(s) does not result in a reduction in the level of severity of the RED PATH condition within 15 minutes from identification of the Core Cooling CSF Status Tree RED PATH A reduction in the level of severity is an improvement in the applicable parameters, e.g., Increasing Trend in Reactor Vessel Water Level (Full RVLIS) and/or Decreasing Trend on Core Thermocouple Temperatures

**INITIATING CONDITIONS:** Plant Parameters, radiation monitor readings or personnel observations that identify an Event for purposes of Emergency Plan Classification.

**INTRUSION/INTRUDER:** Suspected hostile individual present in a protected area without authorization

**ODCM:** Offsite Dose Calculation Manual.

**ORANGE PATH:** Monitoring of one or more CSFs by FR-0 which indicates that the CSF(s) is under severe challenge

**PROJECTILE:** An object ejected, thrown, or launched towards a plant structure. The source of the projectile may be onsite or offsite. Damage is sufficient to cause concern regarding the integrity of the affected structure or the operability or reliability of safety equipment contained therein.

**PROTECTED AREA:** Encompasses all owner controlled areas within the security protected area fence as shown on Figure 4-A.

**RED PATH:** Monitoring of one or more CSFs by the FR-0 which indicates that the CSF(s) is under extreme challenge; prompt operator action is required

**RUPTURED:** (Steam Generator) Existence of primary to secondary leakage of a magnitude greater than charging pump capacity.

**SABOTAGE:** Deliberate damage, misalignment, or mis-operation of plant equipment with the intent to render the equipment inoperable

**SIGNIFICANT TRANSIENT:** An UNPLANNED event involving one or more of the following: (1) An automatic turbine runback > 15% thermal reactor power; (2) Electrical load rejection > 25% full electrical load, (3) Reactor Trip or (4) Safety Injection System Activation.

**SITE PERIMETER (SP):** Encompasses all owner controlled areas in the immediate site environs as shown on Figures 4-A and 7-A.

**STRIKE ACTION:** A work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made on TVA. The STRIKE ACTION must threaten to interrupt normal plant operations.

**TOXIC GAS:** A gas that is dangerous to life or limb by reason of inhalation or skin contact (e.g., chlorine)

**UNPLANNED:** An event or action that is not the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

**UNPLANNED:** (With specific regard to radioactivity releases) A release of radioactivity is UNPLANNED if the release has not been authorized by a Discharge Permit (DP) Implicit in this definition are unintentional releases, unmonitored releases, or planned releases that exceed a condition specified on the DP, e.g., alarm setpoints, minimum dilution flow, minimum release times, maximum release rates, and/or discharge of incorrect tank.

**VALID:** An indication or report or condition is considered to be VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel Implicit in this definition is the need for timely assessment, i.e., within 15 minutes.

**VISIBLE DAMAGE:** Damage to equipment that is readily observable without measurements, testing, or analyses Damage is sufficient enough to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes deformation due to heat or impact, denting, penetration, rupture, cracking, and/or paint blistering Surface blemishes (e.g., paint chipping, scratches) should NOT be included

**VITAL AREA:** Is any area within the PROTECTED AREA which contains equipment, systems, devices, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

## 1.1 Fuel Clad Barrier

1. Critical Safety Function Status	
LOSS	Potential LOSS
Core Cooling Red	Core Cooling Orange OR Heat Sink Red (RHR Not in Service)
-OR-	
2. Primary Coolant Activity Level	
LOSS	Potential LOSS
RCS sample activity is Greater Than 300 µCi/gm dose equivalent iodine-131	Not applicable
-OR-	
3. Incore TCs Hi Quad Average	
LOSS	Potential LOSS
Greater Than 1200°F	Greater Than 727°F
-OR-	
4. Reactor Vessel Water Level	
LOSS	Potential LOSS
Not Applicable	VALID RVLIS level <33% (No RCP running)
-OR-	
5. Containment Radiation Monitors	
LOSS	Potential LOSS
VALID reading increase of Greater Than:  74 R/hr On 1-RE-90-271 and 272 OR 59 R/hr On 1-RE-90-273 and 274	Not Applicable
-OR-	
6. Site Emergency Director Judgment	
Any condition that, in the Judgment of the SM/SED, Indicates Loss or Potential Loss of the Fuel Clad Barrier Comparable to the Conditions Listed Above.	

## 1.2 RCS Barrier

1. Critical Safety Function Status	
LOSS	Potential LOSS
Not Applicable	Pressurized Thermal Shock Red OR Heat Sink Red (RHR Not in Service)
-OR-	
2. RCS Leakage/LOCA	
LOSS	Potential LOSS
RCS Leak results in Loss of subcooling (<65°F Indicated), [85°F ADV]	Non Isolatable RCS Leak Exceeding The Capacity of One Charging Pump (CCP) In the Normal Charging Alignment. OR RCS Leakage Results In Entry Into E-1
-OR-	
3. Steam Generator Tube Rupture	
LOSS	Potential LOSS
SGTR that results in a safety injection actuation OR Entry into E-3	Not Applicable
-OR-	
4. Reactor Vessel Water Level	
LOSS	Potential LOSS
VALID RVLIS level <33% (No RCP Running)	Not Applicable
-OR-	
5. Site Emergency Director Judgment	
Any condition that, in the Judgment of the SM/SED, Indicates Loss or Potential Loss of the RCS Barrier Comparable to the Conditions Listed Above.	

## 1.3 CNTMT Barrier

1. Critical Safety Function Status	
LOSS	Potential LOSS
Not Applicable	Containment (FR-Z.1) Red OR Actions of FR-C.1 (Red Path) are INEFFECTIVE
-OR-	
2. Containment Pressure/Hydrogen	
LOSS	Potential LOSS
Rapid unexplained decrease following initial increase OR Containment pressure or Sump level Not increasing (with LOCA in progress)	Containment Hydrogen Increases to >4% by volume OR Pressure >2.8 PSIG (Phase B) with < One full train of Containment spray
-OR-	
3. Containment Isolation Status	
LOSS	Potential LOSS
Containment Isolation is Incomplete (when required) AND a Release Path to the Environment Exists	Not Applicable
-OR-	
4. Containment Bypass	
LOSS	Potential LOSS
RUPTURED S/G is also FAULTED outside CNTMT OR Prolonged (>4 Hours) Secondary Side release outside CNTMT from a S/G with a SGTL > T/S Limits	Unexplained VALID increase in area or ventilation RAD monitors in areas adjacent to CNTMT (with LOCA in progress)
-OR-	
5. Significant Radioactivity in Containment	
LOSS	Potential LOSS
Not Applicable	VALID Reading increase of Greater Than:  108 R/hr on 1-RE-90-271 and 1-RE-90-272 OR 86 R/hr on 1-RE-90-273 and 1-RE-90-274
-OR-	
6. Site Emergency Director Judgment	
Any condition that, in the Judgment of the SM/SED, Indicates Loss or Potential Loss of the CNTMT Barrier Comparable to the Conditions Listed Above.	

Modes: 1, 2, 3, 4

## INSTRUCTIONS

NOTE: A condition is considered to be MET if, in the judgment of the Site Emergency Director, the condition will be MET imminently (i.e., within 1 to 2 hours, in the absence of a viable success path). The classification shall be made as soon as this determination is made.

- In the matrix to the left, review the INITIATING CONDITIONS in all columns and identify which, if any, INITIATING CONDITIONS are MET. Circle these CONDITIONS.
- For each of the three barriers, identify if any LOSS or Potential LOSS INITIATING CONDITIONS have been MET.
- If a CSF is listed as an INITIATING CONDITION; the respective status tree criteria will be monitored and used to determine the EVENT classification for the Modes listed on the classification flowchart.
- Compare the barrier losses and potential losses to the EVENTS below and make the appropriate declaration.

## EVENTS

UNUSUAL EVENT	ALERT
Loss or Potential LOSS of Containment Barrier	Any LOSS or Potential LOSS of Fuel Clad barrier  OR  Any LOSS or Potential LOSS of RCS barrier
SITE AREA EMERGENCY	GENERAL EMERGENCY
LOSS or Potential LOSS of any two barriers	LOSS of any two barriers and Potential LOSS of third barrier

F  
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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

1

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

2

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## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

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## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

4

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## DESTRUCTIVE PHENOMENON

- |                                  |                      |
|----------------------------------|----------------------|
| 5.1 Earthquake                   | 5.4 River Level High |
| 5.2 Tornado                      | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile<br>Crash | 5.6 Watercraft Crash |
| Table 5-1                        | Figure 5-A           |

5

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

1

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

2

---

## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

---

## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

4

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## DESTRUCTIVE PHENOMENON

- |                         |                      |
|-------------------------|----------------------|
| 5.1 Earthquake          | 5.4 River Level High |
| 5.2 Tornado             | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile | 5.6 Watercraft Crash |
| Crash                   | Figure 5-A           |
| Table 5-1               |                      |

5

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

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## DEFINITIONS/ACRONYMS

**UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY and GENERAL EMERGENCY:** (see SED Judgment 4.7)

**BOMB:** An explosive device (See EXPLOSION)

**CIVIL DISTURBANCE:** A group of twenty (20) or more persons violently protesting station operations or activities at the site.

**CREDIBLE SITE-SPECIFIC** -The determination is made by WBN senior plant management through use of information found in the Safeguards Contingency Plan

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**EVENT:** Assessment of an EVENT commences when recognition is made that one or more of the conditions associated with the event exist. Implicit in this definition is the need for timely assessment, i.e. within 15 minutes

**EXCLUSION AREA BOUNDARY (EAB):** The demarcation of the area surrounding the WBN units in which postulated FSAR accidents will not result in population doses exceeding the criteria of 10 CFR Part 100. Refer to Figure 7-A.

**EXPLOSION:** A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures required for safe operation

**EXTORTION:** An attempt to cause an action at the station by threat of force

**FAULTED:** (Steam Generator) Existence of secondary side leakage (i.e., steam or feed line break) that results in an uncontrolled decrease in steam generator pressure or the steam generator being completely depressurized.

**FIRE:** Combustion characterized by heat and light. Source of smoke such as slipping drive belts or overheated electrical components do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

**FLAMMABLE GAS:** Combustible gases maintained at concentrations less than the LOWER EXPLOSIVE LIMIT (LEL) will not explode due to ignition.

**HOSTAGE:** A person(s) held as leverage against the station to ensure that demands will be met by the station

**INEFFECTIVE:** The specified restoration action(s) does not result in a reduction in the level of severity of the RED PATH condition within 15 minutes from identification of the Core Cooling CSF Status Tree RED PATH. A reduction in the level of severity is an improvement in the applicable parameters, e.g., Increasing Trend in Reactor Vessel Water Level (Full RVLIS) and/or Decreasing Trend on Core Thermocouple Temperatures

**INITIATING CONDITIONS:** Plant Parameters, radiation monitor readings or personnel observations that identify an Event for purposes of Emergency Plan Classification.

**INTRUSION/INTRUDER:** Suspected hostile individual present in a protected area without authorization

**ODCM:** Offsite Dose Calculation Manual

**ORANGE PATH:** Monitoring of one or more CSFs by FR-0 which indicates that the CSF(s) is under severe challenge

**PROJECTILE:** An object ejected, thrown, or launched towards a plant structure. The source of the projectile may be onsite or offsite. Damage is sufficient to cause concern regarding the integrity of the affected structure or the operability or reliability of safety equipment contained therein

**PROTECTED AREA:** Encompasses all owner controlled areas within the security protected area fence as shown on Figure 4-A.

**RED PATH:** Monitoring of one or more CSFs by the FR-0 which indicates that the CSF(s) is under extreme challenge, prompt operator action is required.

**RUPTURED:** (Steam Generator) Existence of primary to secondary leakage of a magnitude greater than charging pump capacity.

**SABOTAGE:** Deliberate damage, misalignment, or mis-operation of plant equipment with the intent to render the equipment inoperable

**SIGNIFICANT TRANSIENT:** An UNPLANNED event involving one or more of the following: (1) An automatic turbine runback > 15% thermal reactor power; (2) Electrical load rejection > 25% full electrical load; (3) Reactor Trip or (4) Safety Injection System Activation

**SITE PERIMETER (SP):** Encompasses all owner controlled areas in the immediate site environs as shown on Figures 4-A and 7-A.

**STRIKE ACTION:** A work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made on TVA. The STRIKE ACTION must threaten to interrupt normal plant operations

**TOXIC GAS:** A gas that is dangerous to life or limb by reason of inhalation or skin contact (e.g., chlorine)

**UNPLANNED:** An event or action that is not the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

**UNPLANNED:** (With specific regard to radioactivity releases) A release of radioactivity is UNPLANNED if the release has not been authorized by a Discharge Permit (DP). Implicit in this definition are unintentional releases, unmonitored releases, or planned releases that exceed a condition specified on the DP, e.g., alarm setpoints, minimum dilution flow, minimum release times, maximum release rates, and/or discharge of incorrect tank.

**VALID:** An indication or report or condition is considered to be VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel. Implicit in this definition is the need for timely assessment, i.e., within 15 minutes

**VISIBLE DAMAGE:** Damage to equipment that is readily observable without measurements, testing, or analyses. Damage is sufficient enough to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, and/or paint blistering. Surface blemishes (e.g., paint chipping, scratches) should NOT be included

**VITAL AREA:** Is any area within the PROTECTED AREA which contains equipment, systems, devices, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation

2.1 Loss of Instrumentation			2.2 Loss of Function		
	Mode	Initiating/Condition		Mode	Initiating/Condition
GENERAL  SITE   ALERT    UNUSUAL  EVENT		Refer to "Fission Product Barrier Matrix" and "Radiological Effluents" (Section 7)			Refer to "Fission Product Barrier Matrix"
	1,2 3,4	Inability to monitor a <b>SIGNIFICANT TRANSIENT</b> in progress (1 and 2 and 3 and 4)  1. Loss of most (>75%) of MCR annunciators (and Annunciator Monitor) or indications  2. <b>SIGNIFICANT TRANSIENT</b> in progress  3. Loss of ICS Computer and SPDS  4. Inability to directly monitor any of the following CSFs  Sub-criticality                      PTS Core Cooling                      Containment Heat Sink                      Inventory	1,2 3,4		Complete loss of function needed to achieve or maintain Hot Shutdown (1 or 2)  1. CSF status tree indicates Core Cooling Red  2. CSF status tree indicates Heat Sink Red (RHR not in service)  Note: Also Refer to "Failure of Rx Protection" (2.3) and "Fission Product Barrier Matrix"
	1,2 3,4	<b>UNPLANNED</b> loss of most (>75%) MCR annunciators (and Annunciator Printer) or indications for >15 minutes with either a <b>SIGNIFICANT TRANSIENT</b> in progress or ICS computer and SPDS Unavailable (1 and 2 and 3)  1. <b>UNPLANNED</b> loss of most (>75%) MCR annunciators (and Annunciator Monitor) or indications for >15 minutes  2. SM/SED Judgment that increased surveillance is required to Safely operate the unit (beyond Shift compliment)  3. (a or b) a <b>SIGNIFICANT TRANSIENT</b> in Progress b Loss of ICS Computer and SPDS	4		Complete loss of function needed to achieve Cold Shutdown when Shutdown required by Tech Specs (1 and 2 and 3)  1. Shutdown is required  2. Loss of RHR capability  3. Loss of secondary heat sink and condenser
	1,2 3,4	<b>UNPLANNED</b> loss of most or All Safety System annunciators or indications in the Control Room for >15 Minutes (1 and 2 and 3)  1. <b>UNPLANNED</b> loss of most (>75%) MCR annunciators (and Annunciator Monitor) or indications for >15 minutes  2. SM/SED Judgment that increased surveillance is required to Safely operate the unit (beyond Shift compliment)  3. ICS Computer or SPDS is in service and capable of displaying data requested		ALL	

## 2.3 Failure of Rx Protection

Mode	Initiating/Condition
1,2	<p>Loss of Core cooling capability and VALID Trip Signals did <u>not</u> result in a reduction of Rx power to &lt;5% and decreasing (1 and 2)</p> <ol style="list-style-type: none"> <li>(a or b) <ol style="list-style-type: none"> <li>CSF status tree indicates Core Cooling Red</li> <li>CSF status tree indicates Heat Sink Red</li> </ol> </li> <li>FR-S.1 entered and subsequent actions <u>Did Not</u> result in a Rx Power of &lt;5% and decreasing</li> </ol>
1,2	<p>Rx power <u>Not</u> &lt;5% and decreasing after VALID Auto and Manual trip signals (1 and 2 and 3)</p> <ol style="list-style-type: none"> <li>VALID Rx Auto Trip signal received or required</li> <li>Manual Rx Trip from the MCR was <u>Not</u> successful</li> <li>FR-S 1 has been entered.</li> </ol>
1,2	<p>Automatic Rx trip did not occur after VALID Trip signal and manual trip from MCR was successful (1 and 2)</p> <ol style="list-style-type: none"> <li>VALID Rx Auto Trip signal received or required</li> <li>Manual Rx Trip from the MCR <u>was</u> successful and power is &lt;5% and decreasing</li> </ol>
	Not Applicable

## 2.4 Fuel Clad Degradation

Mode	Initiating/Condition
	Refer to "Fission Product Barrier Matrix"
	Refer to "Fission Product Barrier Matrix"
	Refer to "Fission Product Barrier Matrix"
1,2,3,4,5	<p>Reactor Coolant System specific activity exceeds LCO (Refer to WBN Tech. Spec. 3.4.16)</p> <ol style="list-style-type: none"> <li>Radiochemistry analysis indicates (a or b) <ol style="list-style-type: none"> <li>Dose equivalent Iodine (I-131) &gt;0.265 <math>\mu\text{Ci/gm}</math> for &gt;48 Hours <u>or</u> in excess of Appendix A of AOI-28</li> <li>Specific activity &gt;100/<math>\bar{E}</math> <math>\mu\text{Ci/gm}</math></li> </ol> </li> </ol>

GENERAL

SITE

LETT

UNUSUAL EVENT

SYSTEM DEGRADATION 1

2.5 RCS Unidentified Leakage			2.6 RCS Identified Leakage		
GENERAL SITE ALERT UNUSUAL EVENT	Mode	Initiating/Condition	Mode	Initiating/Condition	
		Refer to "Fission Product Barrier Matrix"		Refer to "Fission Product Barrier Matrix"	
		Refer to "Fission Product Barrier Matrix"		Refer to "Fission Product Barrier Matrix"	
		Refer to "Fission Product Barrier Matrix"		Refer to "Fission Product Barrier Matrix"	
	1,2 3,4, *5	<p><b>Unidentified or pressure boundary RCS leakage &gt;10 GPM</b></p> <p>1 Unidentified or pressure boundary leakage (as defined by Tech Spec.) &gt;10 GPM as indicated below (a or b)</p> <p>a 1-SI-68-32 results</p> <p>b. With RCS Temperature and PZR Level Stable, VCT Level Dropping at a Rate &gt;10 GPM</p> <p><i>*Note: Applies to Mode 5 if RCS Pressurized</i></p>	1,2, 3,4, *5	<p><b>Identified RCS leakage &gt;25 GPM</b></p> <p>1. Identified RCS leakage (as defined by Tech Spec.) &gt;25 GPM (a or b)</p> <p>a. 1-SI-68-32 results</p> <p>b Level rise in excess of 25 GPM total into PRT, RCDT or CVCS Holdup Tank</p> <p><i>*Note Applies to Mode 5 if RCS Pressurized</i></p>	

GENERAL SITE LETT UNUSUAL EVENT	2.7 Uncontrolled Cooldown	
	Mode	Initiating/Condition
		Refer to "Fission Product Barrier Matrx"
		Refer to "Fission Product Barrier Matrx"
		Refer to "Fission Product Barrier Matrx"
	1,2,3	<b>UNPLANNED rapid depressurization of the Main Steam System resulting in a rapid RCS cooldown <u>and</u> Safety Injection Initiation (1 and 2)</b> <ol style="list-style-type: none"> <li>Rapid depressurization of Main Steam System (&lt;675 psig)</li> <li>Safety Injection has initiated <u>or</u> is required</li> </ol>

2.8 Turbine Failure	
Mode	Initiating/Condition
	Refer to "Fission Product Barrier Matrx"
	Refer to "Fission Product Barrier Matrx"
1,2,3	<b>Turbine Failure has generated PROJECTILES that cause VISIBLE DAMAGE to any area containing Safety Related equipment</b> <ol style="list-style-type: none"> <li>Turbine PROJECTILES has resulted in VISIBLE DAMAGE in any of the following areas <div> <div>Control Building</div> <div>Auxiliary Building</div> <div>Unit #1 Containment</div> <div>Diesel Generator Bldg</div> <div>RWST</div> <div>Intake Pumping Station</div> <div>CST</div> </div> </li> </ol>
1,2,3	<b>Turbine Failure results in Casing penetration</b> <ol style="list-style-type: none"> <li>Turbine Failure which results in penetration of the Turbine Casing <u>or</u> Damage to Main Generator Seals</li> </ol>

SYSTEM  
DEGRADATION  
U1

2.9 Technical Specification		
	Mode	Initiating/Condition
GENERAL SITE		Not Applicable
		Not Applicable
ALERT		Not Applicable
		Not Applicable
UNUSUAL EVENT		Not Applicable
	1,2 3,4	<p><b>Inability to reach required Shutdown within Tech. Spec. limits (1 and 2)</b></p> <ol style="list-style-type: none"> <li>Any Tech Spec LCO Statement, requiring a Mode reduction, has been entered</li> <li>The Unit has not been placed in the required Mode within the time prescribed by the LCO Action Statement</li> </ol>

2.10 Safety Limit		
	Mode	Initiating/Condition
		Not Applicable
		Not Applicable
		Not Applicable
		Not Applicable
		Not Applicable
	1,2, 3,4, 5	<p><b>Safety Limits have been Exceeded (1 or 2)</b></p> <ol style="list-style-type: none"> <li>The combination of thermal power, RCS temperature, and RCS pressure &gt; safety limits as indicated by WBN Tech Spec. Figure 2 1.1-1 "Reactor Core Safety Limits"</li> <li>RCS/Pressurizer pressure exceeds safety limit (&gt;2735 psig)</li> </ol>

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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

1

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

2

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## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

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## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

4

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## DESTRUCTIVE PHENOMENON

- |                         |                      |
|-------------------------|----------------------|
| 5.1 Earthquake          | 5.4 River Level High |
| 5.2 Tornado             | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile | 5.6 Watercraft Crash |
| Crash                   | Figure 5-A           |
| Table 5-1               |                      |

5

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

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**VITAL AREA:** Is any area within the PROTECTED AREA which contains equipment, systems, devices, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation



### 3.1 Loss of AC (Power Ops)

	Mode	Initiating/Condition
<b>GENERAL SITE ALERT UNUSUAL EVENT</b>	1,2, 3,4	<b>Prolonged loss of Offsite and Onsite AC power (1 and 2)</b> 1. 1A <u>and</u> 1B 6.9KV Shutdown Bds de-energized for >15 minutes 2. (a or b) a Core Cooling Red <u>or</u> Orange b. Restoration of Either 1A <u>or</u> 1B 6.9KV Shutdown Bds is not likely within 4 hours of loss
	1,2, 3,4	<b>Loss of Offsite <u>and</u> Onsite AC Power &gt; 15 minutes</b> 1. 1A and 1B 6 9KV Shutdown Bds de-energized for >15 minutes
	1,2, 3,4	<b>Loss of Offsite Power for &gt;15 minutes (1 and 2)</b> 1. C <u>and</u> D CSSTs not available for >15 minutes 2. 1A <u>or</u> 1B Diesel Generator not available
	1,2 3,4	<b>Loss of Offsite Power for &gt;15 minutes (1 and 2)</b> 1 C <u>and</u> D CSSTs not available for >15 minutes 2 Each Diesel Generator is supplying power to its respective Shutdown Board

### 3.2 Loss of AC (Shutdown)

Mode	Initiating/Condition
	<i>Not Applicable</i>
	<i>Not Applicable</i>
5,6, or De-fuel	<b>UNPLANNED loss of Offsite <u>and</u> Onsite AC power for &gt;15 minutes</b> 1. 1A and 1B 6 9KV Shutdown Bds de-energized for >15 minutes  <i>Also Refer to "Loss of Shutdown Systems" (6 1)</i>
5,6, or De-fuel	<b>UNPLANNED loss of Offsite Power for &gt;15 minutes (1 and 2)</b> 1 C <u>and</u> D CSSTs not available for >15 minutes 2 Either Diesel Generator is supplying power to its respective Shutdown Board

### 3.3 Loss of DC Power

#### Initiating/Condition

Mode

GENERAL

SITE

ALERT

UNUSUAL  
EVENT

Refer to "Fission Product Barrier Matrix" and  
"Loss of Function" (2.2)

1,2,  
3,4

**Loss of All Vital DC Power for >15 minutes**

1. Voltage <105V DC on 125V DC Vital Battery  
Buses 1-I and 1-II and 1-III and 1-IV  
for >15 minutes

Also Refer to "Fission Product Barrier Matrix",  
"Loss of Function" (2.2),  
and "Loss of Instrumentation" (2.1)

Also Refer to "Fission Product Barrier Matrix",  
"Loss of Function" (2.2),  
and "Loss of Instrumentation" (2.1)

5,6, or  
De-fuel

**UNPLANNED Loss of the Required Train of  
DC power for >15 minutes**  
(1 or 2)

1. Voltage <105V DC on 125V DC Vital Battery  
Buses 1-I and 1-III for >15 minutes
2. Voltage <105V DC on 125V DC Vital Battery  
Buses 1-II and 1-IV for >15 minutes

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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

1

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

2

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## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

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## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

4

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## DESTRUCTIVE PHENOMENON

- |                               |                      |
|-------------------------------|----------------------|
| 5.1 Earthquake                | 5.4 River Level High |
| 5.2 Tornado                   | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile Crash | 5.6 Watercraft Crash |
| Table 5-1                     | Figure 5-A           |

5

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

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## DEFINITIONS/ACRONYMS

**UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY and GENERAL EMERGENCY:** (see SED Judgment 4 7)

**BOMB:** An explosive device (See EXPLOSION)

**CIVIL DISTURBANCE:** A group of twenty (20) or more persons violently protesting station operations or activities at the site

**CREDIBLE SITE-SPECIFIC** -The determination is made by WBN senior plant management through use of information found in the Safeguards Contingency Plan

**CRITICAL-SAFETY FUNCTION (CSFs):** A plant safety function required to prevent significant release of core radioactivity to the environment There are six CSFs Sub-criticality, Core Cooling, Heat Sink, Pressurized Thermal Shock, Integrity (Containment) and Inventory (RCS)

**EVENT:** Assessment of an EVENT commences when recognition is made that one or more of the conditions associated with the event exist. Implicit in this definition is the need for timely assessment, i.e. within 15 minutes

**EXCLUSION AREA BOUNDARY (EAB):** The demarcation of the area surrounding the WBN units in which postulated FSAR accidents will not result in population doses exceeding the criteria of 10 CFR Part 100. Refer to Figure 7-A.

**EXPLOSION:** A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures required for safe operation

**EXTORTION:** An attempt to cause an action at the station by threat of force.

**FAULTED:** (Steam Generator) Existence of secondary side leakage (i.e., steam or feed line break) that results in an uncontrolled decrease in steam generator pressure or the steam generator being completely depressurized

**FIRE:** Combustion characterized by heat and light Source of smoke such as slipping drive belts or overheated electrical components do not constitute fires Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed

**FLAMMABLE GAS:** Combustible gases maintained at concentrations less than the LOWER EXPLOSIVE LIMIT (LEL) will not explode due to ignition

**HOSTAGE:** A person(s) held as leverage against the station to ensure that demands will be met by the station

**INEFFECTIVE:** The specified restoration action(s) does not result in a reduction in the level of severity of the RED PATH condition within 15 minutes from identification of the Core Cooling CSF Status Tree RED PATH A reduction in the level of severity is an improvement in the applicable parameters, e.g., Increasing Trend in Reactor Vessel Water Level (Full RVLIS) and/or Decreasing Trend on Core Thermocouple Temperatures

**INITIATING CONDITIONS:** Plant Parameters, radiation monitor readings or personnel observations that identify an Event for purposes of Emergency Plan Classification

**INTRUSION/INTRUDER:** Suspected hostile individual present in a protected area without authorization.

**ODCM:** Offsite Dose Calculation Manual

**ORANGE PATH:** Monitoring of one or more CSFs by FR-0 which indicates that the CSF(s) is under severe challenge

**PROJECTILE:** An object ejected, thrown, or launched towards a plant structure The source of the projectile may be onsite or offsite. Damage is sufficient to cause concern regarding the integrity of the affected structure or the operability or reliability of safety equipment contained therein.

**PROTECTED AREA:** Encompasses all owner controlled areas within the security protected area fence as shown on Figure 4-A.

**RED PATH:** Monitoring of one or more CSFs by the FR-0 which indicates that the CSF(s) is under extreme challenge; prompt operator action is required

**RUPTURED:** (Steam Generator) Existence of primary to secondary leakage of a magnitude greater than charging pump capacity

**SABOTAGE:** Deliberate damage, misalignment, or mis-operation of plant equipment with the intent to render the equipment inoperable.

**SIGNIFICANT TRANSIENT:** An UNPLANNED event involving one or more of the following: (1) An automatic turbine runback > 15% thermal reactor power; (2) Electrical load rejection > 25% full electrical load; (3) Reactor Trip or (4) Safety Injection System Activation.

**SITE PERIMETER (SP):** Encompasses all owner controlled areas in the immediate site environs as shown on Figures 4-A and 7-A.

**STRIKE ACTION:** A work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made on TVA. The STRIKE ACTION must threaten to interrupt normal plant operations

**TOXIC GAS:** A gas that is dangerous to life or limb by reason of inhalation or skin contact (e.g., chlorine)

**UNPLANNED:** An event or action that is not the expected result of normal operations, testing, or maintenance Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED

**UNPLANNED:** (With specific regard to radioactivity releases) A release of radioactivity is UNPLANNED if the release has not been authorized by a Discharge Permit (DP) Implicit in this definition are unintentional releases, unmonitored releases, or planned releases that exceed a condition specified on the DP, e.g., alarm setpoints, minimum dilution flow, minimum release times, maximum release rates, and/or discharge of incorrect tank.

**VALID:** An indication or report or condition is considered to be VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel. Implicit in this definition is the need for timely assessment, i.e., within 15 minutes

**VISIBLE DAMAGE:** Damage to equipment that is readily observable without measurements, testing, or analyses Damage is sufficient enough to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes deformation due to heat or impact, denting, penetration, rupture, cracking, and/or paint blistering Surface blemishes (e.g., paint chipping, scratches) should NOT be included

**VITAL AREA:** Is any area within the PROTECTED AREA which contains equipment, systems, devices, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation

4.1 FIRE		
	Mode	Initiating/Condition
GENERAL SITE		Refer to "Fission Product Barrier Matrix"
		Refer to "Control Room Evacuation," (4.5) or Fission Product Barrier Matrix"
ALERT UNUSUAL EVENT	All	<p><b>FIRE in any of the areas listed in Table 4-1 that is affecting Safety Related equipment (1 and 2)</b></p> <p>1 FIRE in any of the areas listed in Table 4-1</p> <p>2 (a or b)</p> <p>a <b>VISIBLE DAMAGE</b> to permanent structure <u>or</u> Safety Related equipment in the specified area is observed due to the <b>FIRE</b></p> <p>b Control Room indication of degraded Safety System <u>or</u> component response due to the <b>FIRE</b></p>
	All	<p><b>FIRE in the PROTECTED AREA threatening any of the areas listed in Table 4-1 that is <u>Not</u> extinguished within 15 minutes from the Time of Control Room notification <u>or</u> verification of Control Room Alarm (Figure 4-A)</b></p>

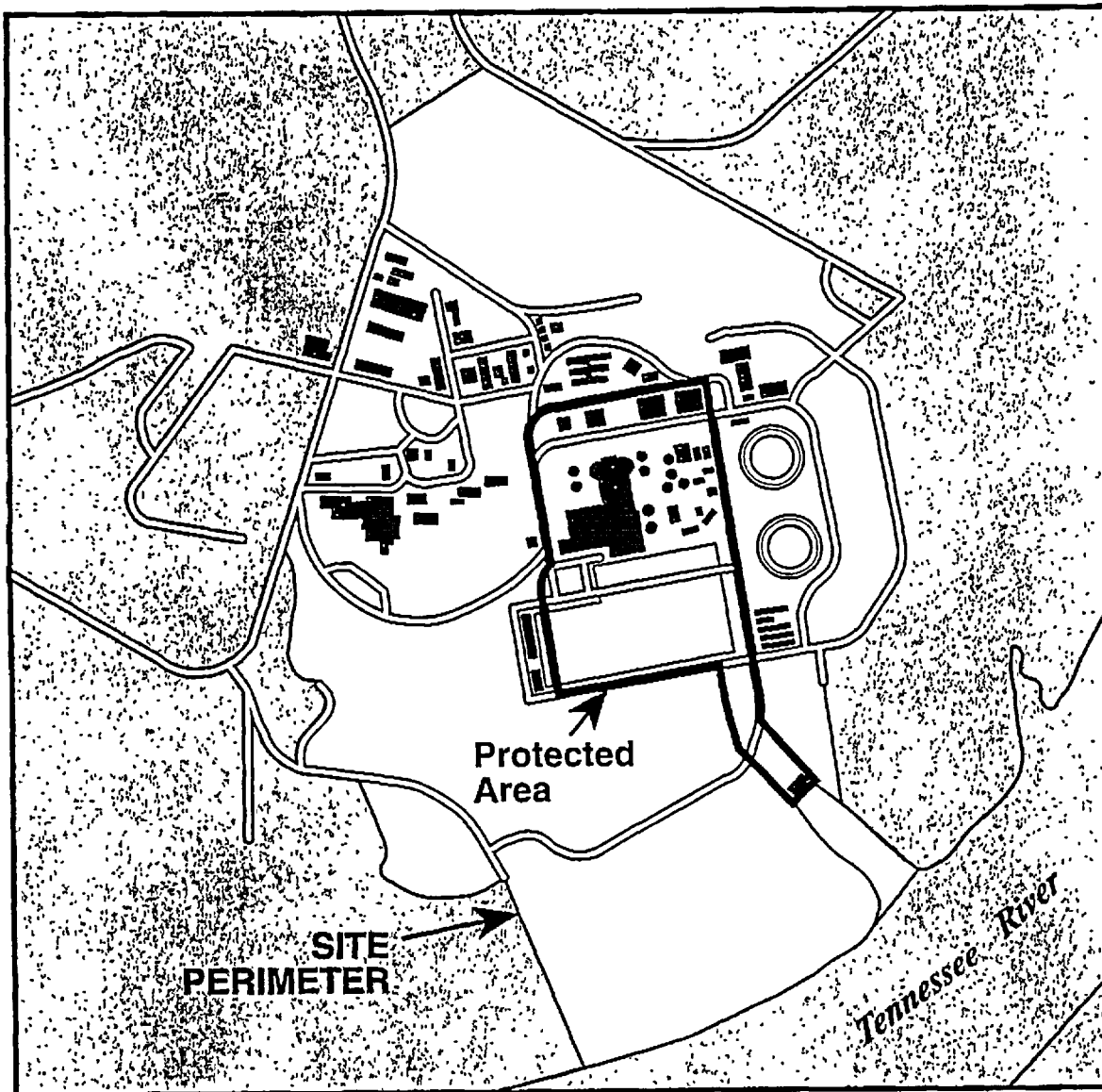
4.2 Explosions	
Mode	Initiating/Condition
	Refer to "Fission Product Barrier Matrix"
	Refer to "Fission Product Barrier Matrix"
All	<p><b>EXPLOSION in any of the areas listed in Table 4-1 that is affecting Safety Related equipment (1 and 2)</b></p> <p>1. <b>EXPLOSION</b> in any of the areas listed in Table 4-1</p> <p>2. (a or b)</p> <p>a An <b>EXPLOSION</b> has caused <b>VISIBLE DAMAGE</b> to Safety Related equipment</p> <p>b Control Room indication of degraded Safety System <u>or</u> component response due to the <b>EXPLOSION</b></p> <p>Refer to "Security" (4 6)</p>
All	<p><b>UNPLANNED EXPLOSION within the PROTECTED AREA resulting in VISIBLE DAMAGE to any permanent structure <u>or</u> equipment (Figure 4-A)</b></p> <p>Refer to "Security" (4 6)</p>

**TABLE 4-1**  
**PLANT AREAS ASSOCIATED WITH FIRE AND EXPLOSION EALS**

Unit #1 Reactor Building  
Auxiliary Building  
Control Building  
Diesel Generator Building  
CST

Additional Diesel Generator Building  
Intake Pumping Station  
Additional Equipment Buildings (Unit 1&2)  
RWST

**Figure 4-A**  
**PROTECTED AREA/SITE PERIMETER**



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4.3 Flammable Gas		
	Mode	Initiating/Condition
GENERAL		Refer to "Fission Product Barrier Matrix"
		Refer to "Fission Product Barrier Matrix"
SITE		
ALERT	All	<p>UNPLANNED release of Flammable Gas within a facility structure containing Safety Related equipment <u>or</u> associated with Power production</p> <p>1. Plant personnel report the average of three readings taken in a ~10ft triangular Area is &gt;25% (LEL) Lower Explosive Limit, as indicated on the monitoring instrument within any building listed in Table 4-2</p>
	All	<p>A. UNPLANNED release of Flammable Gas within the SITE PERIMETER</p> <p>1. Plant personnel report the average of three readings taken in a ~10ft Triangular Area is &gt;25% (LEL) Lower Explosive Limit, as indicated on the monitoring instrument within the SITE PERIMETER (Refer to Figure 4-B)</p> <p style="text-align: center;"><u>OR</u></p> <p>B Confirmed report by Local, County, <u>or</u> State Officials that a Large Offsite Flammable Gas release has occurred within One Mile of the Site with potential to enter the SITE PERIMETER in concentrations &gt;25% of LEL Lower Explosive Limit (Refer to Figure 4-B)</p>
UNUSUAL		
EVENT		

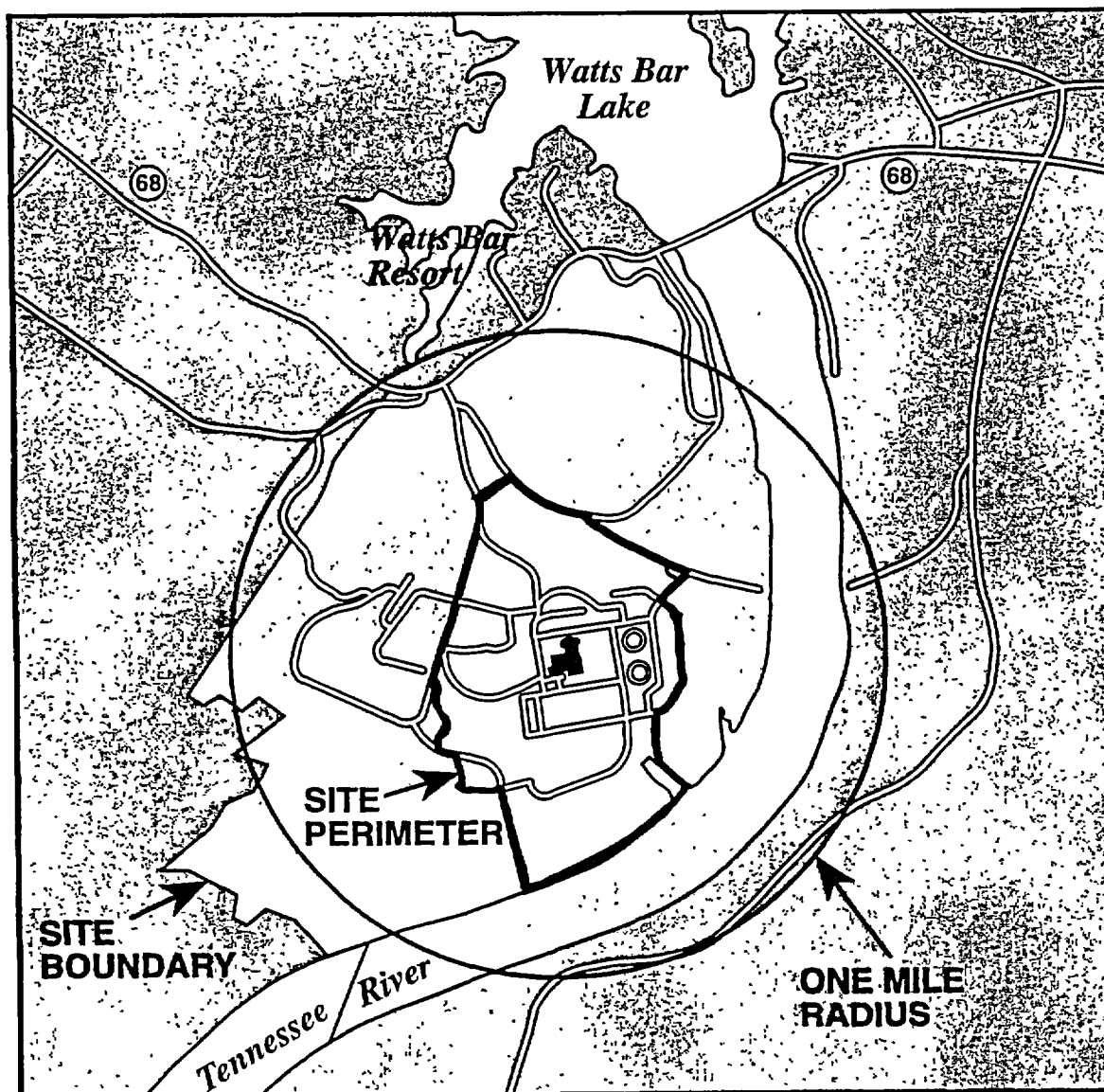
4.4 Toxic Gas	
	Initiating/Condition
	Refer to "Fission Product Barrier Matrix"
	Refer to "Fission Product Barrier Matrix"
All	<p>Release of TOXIC GAS within a facility structure which Prohibits Safe Operation of systems required to establish <u>or</u> maintain Cold S/D (1 and 2 and 3)</p> <p>1. Plant personnel report TOXIC GAS within any building listed in Table 4-2</p> <p>2. (a or b)</p> <p>a Plant personnel report Severe Adverse Health Reactions due to TOXIC GAS (i e., burning eyes, nose, throat, dizziness)</p> <p>b. Sampling indications &gt; (PEL) Permissible Exposure Limit</p> <p>3. Plant personnel would be unable to perform actions necessary to establish and maintain Cold Shutdown while utilizing appropriate personnel protection equipment</p>
All	<p>A. Normal Operations impeded due to access restrictions caused by TOXIC GAS concentrations within a Facility Structure listed in Table 4-2</p> <p style="text-align: center;"><u>OR</u></p> <p>B. Confirmed report by Local, County, <u>or</u> State Officials that a Large Offsite TOXIC GAS release has occurred within One Mile of the Site with potential to enter the Site Perimeter in concentrations &gt;than the (PEL) Permissible Exposure Limit thus causing an Evacuation (Figure 4-B)</p>

**TABLE 4-2**  
**Plant Structures Associated With TOXIC or Flammable Gas EALs**

Unit #1 & 2 Reactor Buildings  
Auxiliary Building  
Control Building  
Diesel Generator Building

Additional Diesel Generator Building  
Intake Pumping Station  
Additional Equipment Bldgs (Unit 1&2)  
CDWE Building  
Turbine Building

**Figure 4-B**  
**ONE MILE RADIUS/SITE PERIMETER**



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## 4.5 Control Room Evacuation

GENERAL

SITE

ALERT

UNUSUAL  
EVENT

Mode	Initiating/Condition
	Refer to "Fission Product Barrier Matrix"
All	<p>Evacuation of the Control Room has been initiated <u>and</u> Control of all necessary equipment <u>Has Not</u> been established within 15 minutes of manning the Auxiliary Control Room (1 and 2 and 3)</p> <ol style="list-style-type: none"> <li>(a or b) <ol style="list-style-type: none"> <li>AOI-30.2 "Fire Safety Shutdown" entered</li> <li>AOI-27 "Main Control Room Inaccessibility" entered</li> </ol> </li> <li>SM/SED Orders Control Room evacuation</li> <li>Control has <u>Not</u> been established at the Remote Shutdown Panel within 15 minutes of manning the Auxiliary Control Room and transfer of switches on Panels L11A and L11B</li> </ol>
All	<p>Evacuation of the Control Room is Required (1 and 2)</p> <ol style="list-style-type: none"> <li>(a or b) <ol style="list-style-type: none"> <li>AOI-30.2 "Fire Safe Shutdown" entered</li> <li>AOI-27 "Main Control Room Inaccessibility" entered</li> </ol> </li> <li>SM/SED Orders Control Room evacuation</li> </ol>
	Not Applicable

## 4.6 Security

Mode	Initiating/Condition
All	<p>Security Event resulting in loss of Control of the Plant</p> <ol style="list-style-type: none"> <li>Hostile Armed Force has taken Control of the Plant, Control Room, <u>or</u> Remote shutdown capability</li> </ol>
All	<p>Security Event has <u>or</u> is occurring which results in Actual <u>or</u> Likely Failures of Plant Functions needed to Protect the Public</p> <ol style="list-style-type: none"> <li>VITAL AREA, other than the Control Room, has been penetrated by a Hostile Armed Force</li> </ol>
All	<p>Confirmed Security Event which indicates an Actual <u>or</u> Potential Substantial Degradation in the level of Safety of the Plant (1 or 2 or 3)</p> <ol style="list-style-type: none"> <li>BOMB discovered within a VITAL AREA</li> <li>CIVIL DISTURBANCE ongoing within the PROTECTED AREA</li> <li>PROTECTED AREA has been penetrated by a Hostile Armed Force</li> </ol> <p>Refer to Figure 4-A For a Drawing of Protected Area and Site Perimeter</p>
All	<p>Confirmed Security Event which indicates a Potential Degradation in the level of Safety of the Plant (1 or 2)</p> <ol style="list-style-type: none"> <li>BOMB discovered within the PROTECTED AREA</li> <li>Security Shift Supervisor reports one <u>or</u> more of the events listed in Table 4-3</li> </ol>

4.7 Emergency Director Judgment		
	Mode	Initiating/Condition
GENERAL SITE ALERT	All	Events are in progress <u>or</u> have occurred which involve Actual <u>or</u> Imminent Substantial Core Degradation <u>or</u> Melting With Potential for Loss of Containment Integrity. Releases can be reasonable expected to exceed EPA Plume Protective Action Guidelines Exposure Levels outside the EXCLUSION AREA BOUNDARY, Refer to Figure 7-A.
	All	Events are in progress <u>or</u> have occurred which involve Actual <u>or</u> Likely Major Failures of Plant Functions needed for the Protection of the Public. Any releases are not expected to result in Exposure Levels which Exceed EPA Plume Protective Action Guidelines Exposure Levels outside the EXCLUSION AREA BOUNDARY, Refer to Figure 7-A.
	All	Events are in progress <u>or</u> have occurred which involve Actual <u>or</u> Potential Substantial Degradation of the Level of Safety of the Plant. Any releases are expected to be limited to small fractions of the EPA Plume Protective Action Guidelines Exposure Levels.
UNUSUAL EVENT	All	Unusual Events are in Progress <u>or</u> have occurred which indicate a Potential Degradation of the Level of Safety of the Plant. No releases of Radioactive Material requiring Offsite Response <u>or</u> Monitoring are expected unless further degradation of Safety Systems occurs.

Table 4-3

SECURITY EVENTS

- a SABOTAGE/INTRUSION has occurred or is occurring within the PROTECTED AREA
- b. HOSTAGE/EXTORTION Situation that Threatens to interrupt Plant Operations
- c CIVIL DISTURBANCE ongoing between the SITE PERIMETER and PROTECTED AREA
- d. Hostile STRIKE ACTION within the PROTECTED AREA which threatens to interrupt Normal Plant Operations (Judgment Based on behavior of Strikers and/or Intelligence received)
- e A CREDIBLE SITE-SPECIFIC security threat notification.

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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

2

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## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

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## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

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## DESTRUCTIVE PHENOMENON

- |                                  |                      |
|----------------------------------|----------------------|
| 5.1 Earthquake                   | 5.4 River Level High |
| 5.2 Tornado                      | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile<br>Crash | 5.6 Watercraft Crash |
| Table 5-1                        | Figure 5-A           |

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

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## DEFINITIONS/ACRONYMS

**UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY and GENERAL EMERGENCY:** (see SED Judgment 4.7)

**BOMB:** An explosive device (See EXPLOSION)

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**CREDIBLE SITE-SPECIFIC** -The determination is made by WBN senior plant management through use of information found in the Safeguards Contingency Plan

**CRITICAL-SAFETY FUNCTION (CSFs):** A plant safety function required to prevent significant release of core radioactivity to the environment There are six CSFs Sub-criticality, Core Cooling, Heat Sink, Pressurized Thermal Shock, Integrity (Containment) and Inventory (RCS).

**EVENT:** Assessment of an EVENT commences when recognition is made that one or more of the conditions associated with the event exist. Implicit in this definition is the need for timely assessment, i.e. within 15 minutes.

**EXCLUSION AREA BOUNDARY (EAB):** The demarcation of the area surrounding the WBN units in which postulated FSAR accidents will not result in population doses exceeding the criteria of 10 CFR Part 100. Refer to Figure 7-A.

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**FAULTED:** (Steam Generator) Existence of secondary side leakage (i.e., steam or feed line break) that results in an uncontrolled decrease in steam generator pressure or the steam generator being completely depressurized

**FIRE:** Combustion characterized by heat and light. Source of smoke such as slipping drive belts or overheated electrical components do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed

**FLAMMABLE GAS:** Combustible gases maintained at concentrations less than the LOWER EXPLOSIVE LIMIT (LEL) will not explode due to ignition.

**HOSTAGE:** A person(s) held as leverage against the station to ensure that demands will be met by the station.

**INEFFECTIVE:** The specified restoration action(s) does not result in a reduction in the level of severity of the RED PATH condition within 15 minutes from identification of the Core Cooling CSF Status Tree RED PATH. A reduction in the level of severity is an improvement in the applicable parameters, e.g., Increasing Trend in Reactor Vessel Water Level (Full RVLIS) and/or Decreasing Trend on Core Thermocouple Temperatures

**INITIATING CONDITIONS:** Plant Parameters, radiation monitor readings or personnel observations that identify an Event for purposes of Emergency Plan Classification

**INTRUSION/INTRUDER:** Suspected hostile individual present in a protected area without authorization

**ODCM:** Offsite Dose Calculation Manual

**ORANGE PATH:** Monitoring of one or more CSFs by FR-0 which indicates that the CSF(s) is under severe challenge.

**PROJECTILE:** An object ejected, thrown, or launched towards a plant structure. The source of the projectile may be onsite or offsite. Damage is sufficient to cause concern regarding the integrity of the affected structure or the operability or reliability of safety equipment contained therein

**PROTECTED AREA:** Encompasses all owner controlled areas within the security protected area fence as shown on Figure 4-A.

**RED PATH:** Monitoring of one or more CSFs by the FR-0 which indicates that the CSF(s) is under extreme challenge; prompt operator action is required.

**RUPTURED:** (Steam Generator) Existence of primary to secondary leakage of a magnitude greater than charging pump capacity.

**SABOTAGE:** Deliberate damage, misalignment, or mis-operation of plant equipment with the intent to render the equipment inoperable.

**SIGNIFICANT TRANSIENT:** An UNPLANNED event involving one or more of the following: (1) An automatic turbine involvement > 15% thermal reactor power; (2) Electrical load rejection > 25% full electrical load; (3) Reactor Trip or (4) Safety Injection System Activation

**SITE PERIMETER (SP):** Encompasses all owner controlled areas in the immediate site environs as shown on Figures 4-A and 7-A.

**STRIKE ACTION:** A work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made on TVA. The STRIKE ACTION must threaten to interrupt normal plant operations

**TOXIC GAS:** A gas that is dangerous to life or limb by reason of inhalation or skin contact (e.g., chlorine)

**UNPLANNED:** An event or action that is not the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

**UNPLANNED:** (With specific regard to radioactivity releases) A release of radioactivity is UNPLANNED if the release has not been authorized by a Discharge Permit (DP). Implicit in this definition are unintentional releases, unmonitored releases, or planned releases that exceed a condition specified on the DP, e.g., alarm setpoints, minimum dilution flow, minimum release times, maximum release rates, and/or discharge of incorrect tank.

**VALID:** An indication or report or condition is considered to be VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel. Implicit in this definition is the need for timely assessment, i.e., within 15 minutes

**VISIBLE DAMAGE:** Damage to equipment that is readily observable without measurements, testing, or analyses. Damage is sufficient enough to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, and/or paint blistering. Surface blemishes (e.g., paint chipping, scratches) should NOT be included

**VITAL AREA:** Is any area within the PROTECTED AREA which contains equipment, systems, devices, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

5.1 Earthquake		
	Mode	Initiating/Condition
GENERAL		Refer to "Fission Product Barrier Matrix"
		Refer to "Fission Product Barrier Matrix"
SITE		
ALERT	All	<p>Earthquake detected by site seismic instrumentation (1 and 2)</p> <ol style="list-style-type: none"> <li>(a and b)               <ol style="list-style-type: none"> <li>Ann 166 D indicates "OBE Spectra Exceeded"</li> <li>Ann 166 E indicates "Seismic Recording Initiated"</li> </ol> </li> <li>(a or b)               <ol style="list-style-type: none"> <li>Ground motion sensed by Plant personnel</li> <li>National Earthquake Information Center at 1-(303) 273-8500 can confirm the event.</li> </ol> </li> </ol>
	All	<p>Earthquake detected by site seismic instrumentation (1 and 2)</p> <ol style="list-style-type: none"> <li>Ann 166 E indicator "Seismic Recording Initiated"</li> <li>(a or b)               <ol style="list-style-type: none"> <li>Ground motion sensed by Plant personnel</li> <li>National Earthquake Information Center at 1-(303) 273-8500 can confirm the event.</li> </ol> </li> </ol>
UNUSUAL EVENT		

5.2 Tornado	
Mode	Initiating/Condition
	Refer to "Fission Product Barrier Matrix"
	Refer to "Fission Product Barrier Matrix"
All	<p>Tornado <u>or</u> High Winds strikes any structure listed in Table 5-1 and results in <b>VISIBLE DAMAGE</b> (1 and 2)</p> <ol style="list-style-type: none"> <li>Tornado or High Winds (Sustained &gt;80 mph &gt; one minute) strikes any structure listed in Table 5-1</li> <li>(a or b)               <ol style="list-style-type: none"> <li>Confirmed report of any <b>VISIBLE DAMAGE</b></li> <li>Control Room indications of degraded Safety System <u>or</u> component response due to event</li> </ol> </li> </ol> <p><i>Note: Site Met Data Instrumentation fails to 0 at &gt;100 mph. National Weather Service Morristown 1-(423) 586-8400 can provide additional information if needed.</i></p>
All	<p>Tornado within the <b>SITE PERIMETER</b></p> <ol style="list-style-type: none"> <li>Plant personnel report a Tornado has been sighted within the <b>SITE PERIMETER</b> (Refer to Figure 5-A)</li> </ol>

5.3 Aircraft/Projectile Crash		
	Mode	Initiating/Condition
GENERAL  SITE		Refer to "Fission Product Barrier Matrix"
		Refer to "Fission Product Barrier Matrix"
ALERT  UNUSUAL EVENT	All	<p>Aircraft <u>or</u> PROJECTILE impacts (Strikes) any Plant structure listed in Table 5-1 resulting in <b>VISIBLE DAMAGE (1 and 2)</b></p> <ol style="list-style-type: none"> <li>Plant personnel report aircraft <u>or</u> PROJECTILE has impacted any structure listed in Table 5-1</li> <li>(a or b) <ol style="list-style-type: none"> <li>Confirmed report of any <b>VISIBLE DAMAGE</b></li> <li>Control Room indications of degraded Safety System <u>or</u> component response due to the event within the specified areas</li> </ol> </li> </ol>
	All	<p>Aircraft crash <u>or</u> PROJECTILE impact within the <b>SITE PERIMETER</b></p> <ol style="list-style-type: none"> <li>Plant personnel report a Aircraft Crash <u>or</u> PROJECTILE impact within the <b>SITE PERIMETER</b> (Refer to Figure 5-A)</li> </ol>

Table 5-1

Plant Structures Associated With Tornado/Hi Wind and Aircraft EALs

- Unit #1 and 2 Reactor Buildings  
Auxiliary Building  
Control Building  
Diesel Generator Building  
Additional Diesel Generator Building  
Intake Pumping Station  
Additional Equipment Buildings (Units 1 & 2)  
CDWE Building  
Turbine Building  
RWST  
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5.4 River Level HIGH		
	Mode	Initiating/Condition
GENERAL		Refer to "Fission Product Barrier Matrix"
		Refer to "Fission Product Barrier Matrix"
SITE		
ALERT	All	River Reservoir level is at Stage II Flood Warning (1 or 2) 1. River Reservoir level >727 Ft 2. Stage II Flood Warning (AOI-7) has been issued by River Systems Operations
	All	River Reservoir level is at Stage I Flood Warning (1 or 2 or 3) 1. River Reservoir level >726.5 Ft from April 16 thru September 30 2. River Reservoir level >714.5 Ft from October 1 thru April 15 3. Stage I Flood Warning (AOI-7) has been issued by River Systems Operations
UNUSUAL EVENT		

5.5 River Level LOW		
	Mode	Initiating/Condition
GENERAL		Refer to "Fission Product Barrier Matrix"
		Refer to "Fission Product Barrier Matrix"
SITE		
ALERT	All	River Reservoir level is <668 Ft (AOI-22) as reported by River Systems Operations
	All	River Reservoir level is ≤673 Ft (AOI-22) as reported by River Systems Operations
UNUSUAL EVENT		

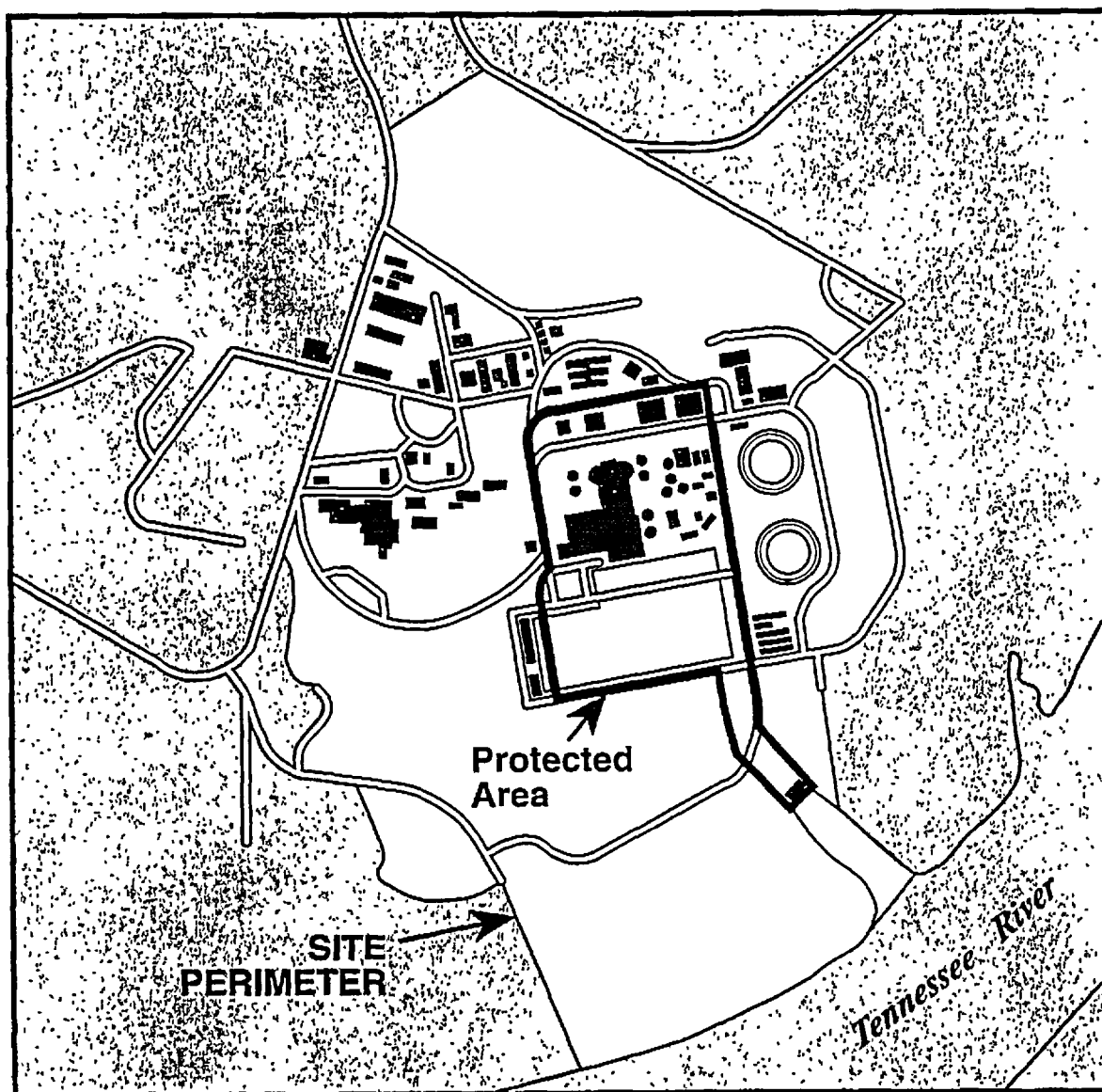
## 5.6 Watercraft Crash

GENERAL SITE ALERT UNUSUAL EVENT	Mode	Initiating/Condition
		<i>Refer to "Fission Product Barrier Matrix"</i>
		<i>Refer to "Fission Product Barrier Matrix"</i>
		<i>Refer to "Fission Product Barrier Matrix"</i>
UNUSUAL EVENT	All	<p><b>Watercraft Strikes the Intake Pumping Station resulting in a reduction of Essential Raw Cooling Water (ERCW) or Raw Cooling Water (RCW) (1 and 2)</b></p> <ol style="list-style-type: none"> <li>Plant personnel report a Watercraft has struck the Intake Pumping Station</li> <li>(a or b or c)               <ol style="list-style-type: none"> <li>ERCW Supply Header Pressure Train A O-PI-67-18A is &lt;15 psig</li> <li>ERCW Supply Header Pressure Train B O-PI-67-17A is &lt;15 psig</li> <li>RCW Supply Header Pressure O-PI-24-22 is &lt;15 psig</li> </ol> </li> </ol>

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Figure 5-A  
PROTECTED AREA/SITE PERIMETER



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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

2

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## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

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## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

4

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## DESTRUCTIVE PHENOMENON

- |                               |                      |
|-------------------------------|----------------------|
| 5.1 Earthquake                | 5.4 River Level High |
| 5.2 Tornado                   | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile Crash | 5.6 Watercraft Crash |
| Table 5-1                     | Figure 5-A           |

5

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

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## DEFINITIONS/ACRONYMS

**UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY and GENERAL EMERGENCY:** (see SED Judgment 4 7)

**BOMB:** An explosive device (See EXPLOSION)

**CIVIL DISTURBANCE:** A group of twenty (20) or more persons violently protesting station operations or activities at the site.

**CREDIBLE SITE-SPECIFIC** -The determination is made by WBN senior plant management through use of information found in the Safeguards Contingency Plan.

**CRITICAL-SAFETY FUNCTION (CSFs):** A plant safety function required to prevent significant release of core radioactivity to the environment. There are six CSFs Sub-criticality, Core Cooling, Heat Sink, Pressurized Thermal Shock, Integrity (Containment) and Inventory (RCS)

**EVENT:** Assessment of an EVENT commences when recognition is made that one or more of the conditions associated with the event exist. Implicit in this definition is the need for timely assessment, i.e. within 15 minutes

**EXCLUSION AREA BOUNDARY (EAB):** The demarcation of the area surrounding the WBN units in which postulated FSAR accidents will not result in population doses exceeding the criteria of 10 CFR Part 100. Refer to Figure 7-A.

**EXPLOSION:** A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures required for safe operation

**EXTORTION:** An attempt to cause an action at the station by threat of force

**FAULTED:** (Steam Generator) Existence of secondary side leakage (i.e., steam or feed line break) that results in an uncontrolled decrease in steam generator pressure or the steam generator being completely depressurized.

**FIRE:** Combustion characterized by heat and light. Source of smoke such as slipping drive belts or overheated electrical components do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

**FLAMMABLE GAS:** Combustible gases maintained at concentrations less than the LOWER EXPLOSIVE LIMIT (LEL) will not explode due to ignition.

**HOSTAGE:** A person(s) held as leverage against the station to ensure that demands will be met by the station.

**INEFFECTIVE:** The specified restoration action(s) does not result in a reduction in the level of severity of the RED PATH condition within 15 minutes from identification of the Core Cooling CSF Status Tree RED PATH. A reduction in the level of severity is an improvement in the applicable parameters, e.g., Increasing Trend in Reactor Vessel Water Level (Full RVLLS) and/or Decreasing Trend on Core Thermocouple Temperatures.

**INITIATING CONDITIONS:** Plant Parameters, radiation monitor readings or personnel observations that identify an Event for purposes of Emergency Plan Classification

**INTRUSION/INTRUDER:** Suspected hostile individual present in a protected area without authorization

**ODCM:** Offsite Dose Calculation Manual

**ORANGE PATH:** Monitoring of one or more CSFs by FR-0 which indicates that the CSF(s) is under severe challenge

**PROJECTILE:** An object ejected, thrown, or launched towards a plant structure. The source of the projectile may be onsite or offsite. Damage is sufficient to cause concern regarding the integrity of the affected structure or the operability or reliability of safety equipment contained therein.

**PROTECTED AREA:** Encompasses all owner controlled areas within the security protected area fence as shown on Figure 4-A.

**RED PATH:** Monitoring of one or more CSFs by the FR-0 which indicates that the CSF(s) is under extreme challenge; prompt operator action is required.

**RUPTURED:** (Steam Generator) Existence of primary to secondary leakage of a magnitude greater than charging pump capacity

**SABOTAGE:** Deliberate damage, misalignment, or mis-operation of plant equipment with the intent to render the equipment inoperable.

**SIGNIFICANT TRANSIENT:** An UNPLANNED event involving one or more of the following (1) An automatic turbine runback > 15% thermal reactor power; (2) Electrical load rejection > 25% full electrical load; (3) Reactor Trip or (4) Safety Injection System Activation.

**SITE PERIMETER (SP):** Encompasses all owner controlled areas in the immediate site environs as shown on Figures 4-A and 7-A.

**STRIKE ACTION:** A work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made on TVA. The STRIKE ACTION must threaten to interrupt normal plant operations

**TOXIC GAS:** A gas that is dangerous to life or limb by reason of inhalation or skin contact (e.g., chlorine)

**UNPLANNED:** An event or action that is not the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

**UNPLANNED:** (With specific regard to radioactivity releases) A release of radioactivity is UNPLANNED if the release has not been authorized by a Discharge Permit (DP). Implicit in this definition are unintentional releases, unmonitored releases, or planned releases that exceed a condition specified on the DP, e.g., alarm setpoints, minimum dilution flow, minimum release times, maximum release rates, and/or discharge of incorrect tank.

**VALID:** An indication or report or condition is considered to be VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel. Implicit in this definition is the need for timely assessment, i.e., within 15 minutes.

**VISIBLE DAMAGE:** Damage to equipment that is readily observable without measurements, testing, or analyses. Damage is sufficient enough to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, and/or paint blistering. Surface blemishes (e.g., paint chipping, scratches) should NOT be included.

**VITAL AREA:** Is any area within the PROTECTED AREA which contains equipment, systems, devices, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

## 6.1 Loss of Shutdown Systems

	Mode	Initiating/Condition
GENERAL SITE ALERT	5,6	<p>Note Additional information will be provided later pending NRC Guidance on Shutdown EALs</p> <p>Refer to "Gaseous Effluents" (7.1)</p>
	5,6	<p><b>Loss of water level in the Rx vessel that has or will uncover fuel in the Rx vessel with CNTMT closure established (1 and 2 and 3 and 4 and 5)</b></p> <ol style="list-style-type: none"> <li>1 Loss of RHR capability</li> <li>2 Rx vessel water level &lt; el. 718'</li> <li>3 Incore TCs (if available) indicate RCS temp &gt;200° F</li> <li>4 RCS is vented/open to CNTMT</li> <li>5 CNTMT closure is established</li> </ol> <p>Note: If CNTMT open, refer to "Gaseous Effluents" (7.1)</p>
	5,6	<p><b>Inability to maintain Unit in Cold Shutdown (1 and 2 and 3)</b></p> <ol style="list-style-type: none"> <li>1. RHR capability is <u>not</u> available for RCS Cooling</li> <li>2. Incore TCs (if available) indicate RCS temp &gt;200° F</li> <li>3 CNTMT closure is established</li> </ol>
UNUSUAL EVENT	5,6	<p>Note Additional information will be provided later pending NRC Guidance on Shutdown EALs</p>

## 6.2 Loss of AC (Shutdown)

Mode	Initiating/Condition
	Not Applicable
	Not Applicable
5,6 or De-Fuel	<p><b>UNPLANNED loss of Offsite <u>and</u> Onsite AC Power for &gt;15 minutes</b></p> <ol style="list-style-type: none"> <li>1 1A and 1B 6.9 KV Shutdown Bds de-energized for &gt;15 minutes</li> </ol>
5,6 or De-Fuel	<p><b>UNPLANNED loss of All Offsite Power for &gt;15 minutes (1 and 2)</b></p> <ol style="list-style-type: none"> <li>1. C and D CSSTS not available For &gt;15 minutes</li> <li>2 Either Diesel Generator is supplying power to its respective Shutdown Board</li> </ol>

6.3 Loss of DC (Shutdown)		
	Mode	Initiating/Condition
GENERAL SITE ALERT		Not Applicable
		Not Applicable
		Not Applicable
UNUSUAL EVENT	5,6 or De-fuel	<b>UNPLANNED loss of the required Train of DC Power for &gt;15 minutes (1 or 2)</b>  1 Voltage <105V DC on 125V DC Vital Battery Buses 1-I <u>and</u> 1-III for >15 minutes  2 Voltage <105V DC on 125V DC Vital Battery Buses 1-II <u>and</u> 1-IV for >15 minutes.

6.4 Fuel Handling	
	Mode
	Initiating/Condition
	Refer to "Gaseous Effluents" (7.1)
	Refer to "Gaseous Effluents" (7.1)
	All
	<b>Major damage to Irradiated Fuel, <u>or</u> Loss of water level that has <u>or</u> will uncover Irradiated Fuel outside the Reactor Vessel (1 and 2)</b>  1. <b>VALID</b> alarm on O-RE-90-101 <u>or</u> O-RE-90-102 <u>or</u> O-RE-90-103 <u>or</u> 1-RE-90-130/131 <u>or</u> 1-RE-90-112 <u>or</u> 1-RE-90-400 <u>or</u> 2-RE-90-400 2. (a or b) a Plant personnel report damage of Irradiated Fuel sufficient to rupture Fuel Rods b Plant personnel report water level drop has <u>or</u> will exceed makeup capability such that Irradiated Fuel will be uncovered
	All
	<b>UNPLANNED loss of water level in Spent Fuel Pool <u>or</u> Reactor Cavity <u>or</u> Transfer Canal with fuel remaining covered (1 and 2 and 3)</b>  1. Plant personnel report water level drop in Spent Fuel Pool <u>or</u> Reactor Cavity, <u>or</u> Transfer Canal  2. <b>VALID</b> alarm on O-RE-90-102 <u>or</u> O-RE-90-103 <u>or</u> 1-RE-90-59 <u>or</u> 1-RE-90-60  3. Fuel remains covered with water

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## FISSION PRODUCT BARRIER MATRIX (Modes 1-4)

- 1.1 Fuel Clad
- 1.2 RCS
- 1.3 Containment

1

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## SYSTEM DEGRADATION

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2.1 Loss of Instrumentation        | 2.6 RCS Identified Leakage  |
| 2.2 Loss of Function/Communication | 2.7 Uncontrolled Cool Down  |
| 2.3 Failure of Reactor Protection  | 2.8 Turbine Failure         |
| 2.4 Fuel Clad Degradation          | 2.9 Technical Specification |
| 2.5 RCS Unidentified Leakage       | 2.10 Safety Limit           |

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## LOSS OF POWER

- 3.1 Loss of AC (Power Ops)
- 3.2 Loss of AC (Shutdown)
- 3.3 Loss of DC

3

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## HAZARDS and SED JUDGMENT

- |               |                   |                             |
|---------------|-------------------|-----------------------------|
| 4.1 Fire      | 4.3 Flammable Gas | 4.5 Control Room Evacuation |
| 4.2 Explosion | 4.4 Toxic Gas     | 4.6 Security                |
| Table 4-1     | Table 4-2         | 4.7 SED Judgment            |
| Figure 4-A    | Figure 4-B        | Table 4-3                   |

4

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## DESTRUCTIVE PHENOMENON

- |                         |                      |
|-------------------------|----------------------|
| 5.1 Earthquake          | 5.4 River Level High |
| 5.2 Tornado             | 5.5 River Level Low  |
| 5.3 Aircraft/Projectile | 5.6 Watercraft Crash |
| Crash                   | Figure 5-A           |
| Table 5-1               |                      |

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## SHUTDOWN SYSTEM DEGRADATION

- 6.1 Loss of Shutdown Systems
- 6.2 Loss of AC (Shutdown)
- 6.3 Loss of DC (Shutdown)
- 6.4 Fuel Handling

6

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## RADIOLOGICAL

- |                      |                      |
|----------------------|----------------------|
| 7.1 Gaseous Effluent | 7.3 Radiation Levels |
| 7.2 Liquid Effluent  | 7.4 Fuel Handling    |
| Table 7-1            | Table 7-2            |
| Figure 7-A           |                      |

7

## DEFINITIONS/ACRONYMS

**UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY and GENERAL EMERGENCY:** (see SED Judgment 4 7)

**BOMB:** An explosive device (See EXPLOSION)

**CIVIL DISTURBANCE:** A group of twenty (20) or more persons violently protesting station operations or activities at the site

**CREDIBLE SITE-SPECIFIC** -The determination is made by WBN senior plant management through use of information found in the Safeguards Contingency Plan

**CRITICAL-SAFETY FUNCTION (CSFs):** A plant safety function required to prevent significant release of core radioactivity to the environment. There are six CSFs: Sub-criticality, Core Cooling, Heat Sink, Pressurized Thermal Shock, Integrity (Containment) and Inventory (RCS).

**EVENT:** Assessment of an EVENT commences when recognition is made that one or more of the conditions associated with the event exist. Implicit in this definition is the need for timely assessment, i.e. within 15 minutes

**EXCLUSION AREA BOUNDARY (EAB):** The demarcation of the area surrounding the WBN units in which postulated FSAR accidents will not result in population doses exceeding the criteria of 10 CFR Part 100. Refer to Figure 7-A.

**EXPLOSION:** A rapid, violent, unconfined combustion, or a catastrophic failure of pressurized equipment that imparts energy of sufficient force to potentially damage permanent structures required for safe operation.

**EXTORTION:** An attempt to cause an action at the station by threat of force.

**FAULTED:** (Steam Generator) Existence of secondary side leakage (i.e., steam or feed line break) that results in an uncontrolled decrease in steam generator pressure or the steam generator being completely depressurized

**FIRE:** Combustion characterized by heat and light. Source of smoke such as slipping drive belts or overheated electrical components do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

**FLAMMABLE GAS:** Combustible gases maintained at concentrations less than the LOWER EXPLOSIVE LIMIT (LEL) will not explode due to ignition

**HOSTAGE:** A person(s) held as leverage against the station to ensure that demands will be met by the station.

**INEFFECTIVE:** The specified restoration action(s) does not result in a reduction in the level of severity of the RED PATH condition within 15 minutes from identification of the Core Cooling CSF Status Tree RED PATH. A reduction in the level of severity is an improvement in the applicable parameters, e.g., Increasing Trend in Reactor Vessel Water Level (Full RVLIS) and/or Decreasing Trend on Core Thermocouple Temperatures

**INITIATING CONDITIONS:** Plant Parameters, radiation monitor readings or personnel observations that identify an Event for purposes of Emergency Plan Classification.

**INTRUSION/INTRUDER:** Suspected hostile individual present in a protected area without authorization

**ODCM:** Offsite Dose Calculation Manual

**ORANGE PATH:** Monitoring of one or more CSFs by FR-0 which indicates that the CSF(s) is under severe challenge

**PROJECTILE:** An object ejected, thrown, or launched towards a plant structure. The source of the projectile may be onsite or offsite. Damage is sufficient to cause concern regarding the integrity of the affected structure or the operability or reliability of safety equipment contained therein

**PROTECTED AREA:** Encompasses all owner controlled areas within the security protected area fence as shown on Figure 4-A.

**RED PATH:** Monitoring of one or more CSFs by the FR-0 which indicates that the CSF(s) is under extreme challenge, prompt operator action is required

**RUPTURED:** (Steam Generator) Existence of primary to secondary leakage of a magnitude greater than charging pump capacity.

**SABOTAGE:** Deliberate damage, misalignment, or mis-operation of plant equipment with the intent to render the equipment inoperable.

**SIGNIFICANT TRANSIENT:** An UNPLANNED event involving one or more of the following: (1) An automatic turbine rollback > 15% thermal reactor power; (2) Electrical load rejection > 25% full electrical load; (3) Reactor Trip or (4) Safety Injection System Activation

**SITE PERIMETER (SP):** Encompasses all owner controlled areas in the immediate site environs as shown on Figures 4-A and 7-A.

**STRIKE ACTION:** A work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made on TVA. The STRIKE ACTION must threaten to interrupt normal plant operations.

**TOXIC GAS:** A gas that is dangerous to life or limb by reason of inhalation or skin contact (e.g., chlorine)

**UNPLANNED:** An event or action that is not the expected result of normal operations, testing, or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED

**UNPLANNED:** (With specific regard to radioactivity releases) A release of radioactivity is UNPLANNED if the release has not been authorized by a Discharge Permit (DP). Implicit in this definition are unintentional releases, unmonitored releases, or planned releases that exceed a condition specified on the DP, e.g., alarm setpoints, minimum dilution flow, minimum release times, maximum release rates, and/or discharge of incorrect tank.

**VALID:** An indication or report or condition is considered to be VALID when it is conclusively verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel. Implicit in this definition is the need for timely assessment, i.e., within 15 minutes.

**VISIBLE DAMAGE:** Damage to equipment that is readily observable without measurements, testing, or analyses. Damage is sufficient enough to cause concern regarding the continued operability or reliability of affected safety structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, and/or paint blistering. Surface blemishes (e.g., paint chipping, scratches) should NOT be included.

**VITAL AREA:** Is any area within the PROTECTED AREA which contains equipment, systems, devices, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation

7.1 Gaseous Effluents		
	Mode	Initiating/Condition
GENERAL SITE ALERT UNUSUAL EVENT	All	<p>EAB dose resulting from an actual <u>or</u> imminent release of Gaseous Radioactivity that exceeds 1000 mrem TEDE <u>or</u> 5000 mrem Thyroid CDE for the actual <u>or</u> projected duration of the release (1 or 2 or 3)</p> <ol style="list-style-type: none"> <li>1. A <b>VALID</b> rad monitor reading exceeds the values under General in Table 7-1 for &gt;15 minutes, unless assessment within this time period confirms that the <b>Criterion</b> is <b>Not</b> exceeded</li> <li>2. Field survey results indicate &gt;1000 mrem/hr gamma <u>or</u> an I-131 concentration of <math>3.9 \times 10^{-6}</math> <math>\mu</math> Ci/cc at SP</li> <li>3. EP dose assessment results indicate EAB dose &gt;1000 mrem TEDE <u>or</u> &gt;5000 mrem Thyroid CDE for the actual <u>or</u> projected duration of the release (Figure 7-A)</li> </ol>
	All	<p>EAB dose resulting from an actual <u>or</u> imminent release of Gaseous Radioactivity that exceeds 100 mrem TEDE <u>or</u> 500 mrem Thyroid CDE for the actual <u>or</u> projected duration of the release (1 or 2 or 3)</p> <ol style="list-style-type: none"> <li>1. A <b>VALID</b> rad monitor reading exceeds the values under Site in Table 7-1 for &gt;15 minutes, unless assessment within this time period confirms that the <b>Criterion</b> is <b>Not</b> exceeded</li> <li>2. Field survey results indicate &gt;100 mrem/hr gamma <u>or</u> an I-131 concentration of <math>3.9 \times 10^{-7}</math> <math>\mu</math> Ci/cc at SP</li> <li>3. EP dose assessment results indicate EAB dose &gt;100 mrem TEDE <u>or</u> &gt;500 mrem Thyroid CDE for the actual <u>or</u> projected duration of the release (Figure 7-A)</li> </ol>
	All	<p>Any <b>UNPLANNED</b> release of Gaseous Radioactivity that exceeds 200 times the ODCM Limit for &gt;15 minutes (1 or 2 or 3)</p> <ol style="list-style-type: none"> <li>1. A <b>VALID</b> rad monitor reading exceeds the values under Alert in Table 7-1 for &gt;15 minutes, unless assessment within this time period confirms that the <b>Criterion</b> is <b>Not</b> exceeded</li> <li>2. Field survey results indicate &gt;10 mrem/hr gamma at SP &gt;15 minutes</li> <li>3. EP dose assessment results indicate EAB dose &gt;10 mrem TEDE for the duration of the release (Figure 7-A)</li> </ol>
	All	<p>Any <b>UNPLANNED</b> release of Gaseous Radioactivity that exceeds 2 times the ODCM Limit for &gt;60 minutes (1 or 2 or 3)</p> <ol style="list-style-type: none"> <li>1. A <b>VALID</b> rad monitor reading exceeds the values under UE in Table 7-1 for &gt;60 minutes, unless assessment within this time period confirms that the <b>Criterion</b> is <b>Not</b> exceeded</li> <li>2. Field survey results indicate &gt;0.1 mrem/hr gamma at SP for &gt;60 minutes</li> <li>3. EP dose assessment results indicate EAB dose &gt;0.1 mrem TEDE for the duration of the release (Figure 7-A)</li> </ol>

7.2 Liquid Effluents	
Mode	Initiating/Condition
	Not Applicable
	Not Applicable
All	<p>Any <b>UNPLANNED</b> release of Liquid Radioactivity that exceeds 200 times the ODCM Limit for &gt;15 minutes (1 or 2)</p> <ol style="list-style-type: none"> <li>1. A <b>VALID</b> rad monitor reading exceeds the values under Alert in Table 7-1 for &gt;15 minutes, unless assessment within this time period confirms that the <b>Criterion</b> is <b>Not</b> exceeded.</li> <li>2. Sample results exceed 200 times the ODCM limit value for an unmonitored release of liquid radioactivity &gt;15 minutes in duration</li> </ol>
All	<p>Any <b>UNPLANNED</b> release of Liquid Radioactivity to the Environment that exceeds 2 times the ODCM Limit for &gt;60 minutes (1 or 2)</p> <ol style="list-style-type: none"> <li>1. A <b>VALID</b> rad monitor reading exceeds the values under UE in Table 7-1 for &gt;60 minutes, unless assessment within this time period confirms that the <b>Criterion</b> is <b>Not</b> exceeded.</li> <li>2. Sample results exceed 2 times the ODCM limit value for an unmonitored release of liquid radioactivity &gt;60 minutes in duration</li> </ol>



**TABLE 7-1**  
**EFFLUENT RADIATION MONITOR EALS<sup>(1)</sup>**

**NOTE:**

The values below, if exceeded, indicate the need to perform the specified assessment. If the assessment can not be completed within 15 minutes (60 minutes for UE), the declaration shall be made based on the **VALID** reading. As used here, the radiation monitor indications as displayed on ICS are the primary indicators. If ICS is unavailable, utilize the radiation monitor readings in the control room or local indication as necessary.

Monitor	ICS Screen	Units	UE	Alert	Site	General
<b>Total Site</b>	EFF1	μCi/s <sup>(2)</sup>	1.5E+05	1.5E+07	2.5E+08	2.5E+09
<b>U1 Shield Building</b> 1-RE-90-400	EFF1	μCi/s	6.7E+04	6.7E+06	1.0E+08	1.0E+09
<b>U2 Shield Building</b> 2-RE-90-400	EFF1	μCi/s	1.5E+04	1.5E+06	2.5E+07	2.6E+08
<b>Auxiliary Building</b> 0-RE-90-101B	4RM1	cpm	1.2E+04	1.2E+06	***** (1)	***** (1)
<b>Service Building</b> 0-RE-90-132B	4RM1	cpm	4.3E+03	4.3E+05	9.8E+06	***** (1)
<b>U1 Condenser Vacuum Exhaust</b> 1-RE-90-404A 1-RE-90-404B	3PAM 3PAM	μCi/cc <sup>(3)</sup> μCi/cc	5.5E-02 5.5E-02	5.5E+00 5.5E+00	8.83E+01 8.83E+01	8.83E+02 8.83E+02
<b>S/G Discharge Monitors</b> 1-RE-90-421 thru 424 (B)	4RM2	mR/hr <sup>(4)</sup>	NA	3.5E+02	3.5E+03	3.5E+04
<b>Liquid Monitors</b> 0-RE-90-122 1-RE-90-120,121 0-RE-90-225 0-RE-90-212	n/a 4RM2 4RM2 4RM2 4RM2	μCi/ml <sup>(2)</sup> cpm cpm cpm cpm	1.8E-05 1.1E+06 1.0E+06 9.2E+05 1.5E+04	1.8E-03 ***** (1) ***** (1) ***** (1) 1.5E+06	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A
<b>RELEASE DURATION</b>	minutes		60	15	15	15
<b>ASSESSMENT METHOD:</b> ICS or radiation monitor (RM) readings in the MCR or local indication as necessary						

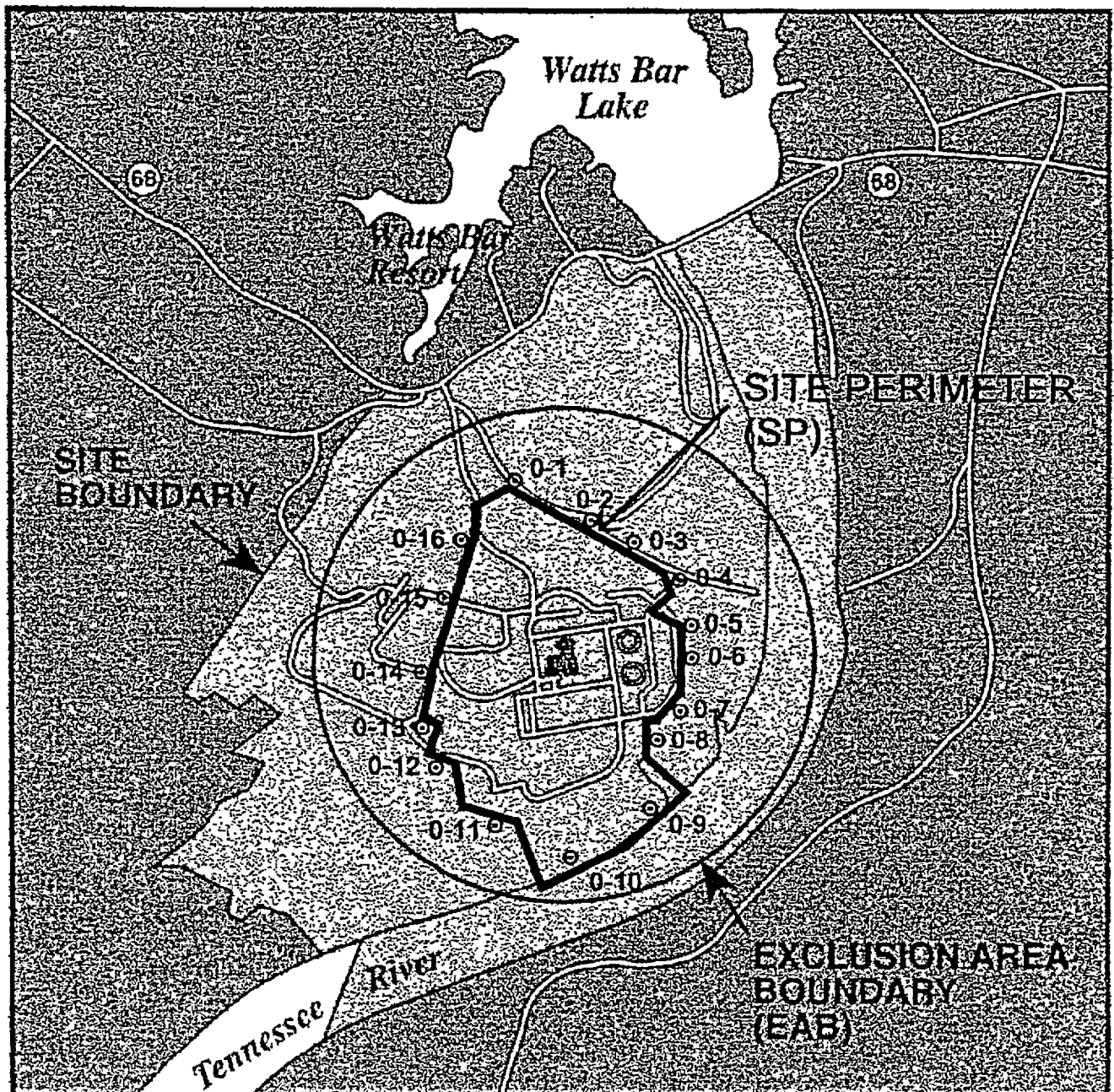
Note: (1) Table values are calculated values. The \*\*\*\*\* indicates the monitor is off scale.

- (2) These releases rate values in μCi/s and μCi/ml are provided on the gaseous and liquid release points for Information Only. Actual monitor readings are given in the table corresponding to the monitor for the four emergency classifications.
- (3) This eberline channel reads out in cpm in the **MCR**. Indications of a radioactivity release via this pathway would be S/G blowdown monitors or other indications of primary-to-secondary leakage such as S/G level increase or pressurizer level decrease. ICS calculates μCi/cc and has a visual indication of an alarm condition when the indications exceeds 5.5E-02μCi/cc. This channel was included in the table to provide a means to further assess a release detected by other indications and to provide a path for possible escalation.
- (4) These unit values are based on flow rates through one [1] PORV of 970,000 lb/hr at 1,185 psig, 600°F. Before using these values, ensure a release to the environment is ongoing (e.g PORV)

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**Figure 7-A**  
**EXCLUSION AREA, SITE BOUNDARY and SITE PERIMETER**

NOTE: The Site Boundary used here is consistent with the definition in the Offsite Dose Calculation Manual. Do Not confuse this boundary with the SITE PERIMETER defined in these EALs, or with other definitions of "Site Boundary."



Note: Numbered points are [SP] radiological survey point for all sectors.

7.3 Radiation Levels		
	Mode	Initiating/Condition
GENERAL SITE		Refer to "Fission Product Barrier Matrix" or "Gaseous Effluents" (7.1)
		Refer to "Fission Product Barrier Matrix" or "Gaseous Effluents" (7.1)
ALERT UNUSUAL EVENT	All	<p>UNPLANNED increases in Radiation levels within the Facility that impedes Safe Operations or establishment or maintenance of Cold Shutdown (1 or 2)</p> <ol style="list-style-type: none"> <li>1. VALID area Radiation Monitor readings or survey results exceed 15 mrem/hr in the Control Room or CAS</li> <li>2. (a and b) <ol style="list-style-type: none"> <li>a. VALID area radiation monitor readings exceed values listed in Table 7-2</li> <li>b. Access restrictions impede operation of systems necessary for Safe Operation or the ability to establish Cold Shutdown</li> </ol> </li> </ol> <p>See UNUSUAL EVENT Note Below</p>
	All	<p>UNPLANNED increase in Radiation levels within the Facility</p> <ol style="list-style-type: none"> <li>1. VALID area Radiation Monitor readings increase by a factor 1000 over normal levels</li> </ol> <p>Note: In Either the UE or ALERT EAL, the SED must determine the cause of Increase in Radiation Levels and Review Other INITIATING/CONDITIONS for Applicability (e.g., a dose rate of 15 mrem/hr in the Control Room could be caused by a release associated with a DBA).</p>

7.4 Fuel Handling	
	Mode
Initiating/Condition	
	Refer to "Gaseous Effluents" (7.1)
	Refer to "Gaseous Effluents" (7.1)
All	<p>Major damage to Irradiated Fuel, or Loss of water level that has or will uncover Irradiated Fuel outside the Reactor Vessel (1 and 2)</p> <ol style="list-style-type: none"> <li>1. VALID alarm on 0-RE-90-101 or 0-RE-90-102 or 0-RE-90-103 or 1-RE-90-130/131 or 1-RE-90-112 or 1-RE-90-400 or 2-RE-90-400</li> <li>2. (a or b) <ol style="list-style-type: none"> <li>a. Plant personnel report damage of Irradiated Fuel sufficient to rupture Fuel Rods</li> <li>b. Plant personnel report water level drop has or will exceed makeup capacity such that Irradiated Fuel will be uncovered</li> </ol> </li> </ol>
All	<p>UNPLANNED loss of water level in Spent Fuel Pool or Reactor Cavity or Transfer Canal with fuel remaining covered (1 and 2 and 3)</p> <ol style="list-style-type: none"> <li>1. Plant personnel report water level drop in Spent Fuel Pool, or Reactor Cavity, or Transfer Canal</li> <li>2. VALID alarm on 0-RE-90-102 or 0-RE-90-103 or 1-RE-90-59 or 1-RE-90-60</li> <li>3. Fuel remains covered with water.</li> </ol>

Table 7-2

ALERT - RADIATION LEVELS

Monitor No.	Location Building and Elevation	Monitor Reading *
1&2 RE-90-1	Auxiliary El. 757.0 (spent fuel pool)	$2.5 \times 10^3$ mR/hr
1-RE-90-2	Auxiliary El. 757.0 (personnel air lock)	$2.5 \times 10^0$ R/hr
0-RE-90-3	Auxiliary El. 729.0 (waste pac. area)	$2.5 \times 10^3$ mR/hr
0-RE-90-4	Auxiliary El. 713.0 (decon room)	$1.5 \times 10^3$ mR/hr
0-RE-90-5	Auxiliary El. 737.0 (spt. fuel pool pmp. ar.)	$1.5 \times 10^3$ mR/hr
1&2-RE-90-6	Auxiliary El. 737.0 (comp. cl. wtr. ht. ex. ar.)	$1.5 \times 10^3$ mR/hr
1&2-RE-90-7	Auxiliary El. 713.0 (sample room)	$2 \times 10^3$ mR/hr
1&2-RE-90-8	Auxiliary El. 713.0 (aux. feed pump area)	$1.5 \times 10^3$ mR/hr
0-RE-90-9	Auxiliary El. 692.0 (wst. cond. evap. tk. ar.)	$1.5 \times 10^3$ mR/hr
1&2-RE-90-10	Auxiliary El. 692.0 (cvcs area)	$1.5 \times 10^3$ mR/hr
0-RE-90-11	Auxiliary El. 676.0 (ctmt. spry. & rhr pmp ar.)	$1.5 \times 10^3$ mR/hr
1-RE-90-61	Auxiliary El. 736.0 (RB low. cmpt. inst. rm.)	$2.5 \times 10^3$ mR/hr
0-RE-90-230	Turbine El. 685.0 (conden. demin.)	$1.5 \times 10^3$ mR/hr
0-RE-90-231	Turbine El. 685.0 (conden. demin.)	$1.5 \times 10^3$ mR/hr

Note: \*These monitors read out in mR/hr. It is assumed that this is equivalent to mrem/hr.

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## SOURCE NOTES

Page 1 of 1

1. NIR-0551, DV-847100 F00012, and MC-850321 809004, MSC-00956, NCO 920030366. Monitor readings and challenges to barriers are provided in EPIP-1, Section 1 in (1.1 Fuel Clad 1.1.5 and 1.3 CNTMT Barrier 1.3.5), Section 7 (7.1 Gaseous Effluents, 7.2 Liquid Effluents, Table 7-1, 7.3 Radiation Levels, 7.4 Fuel Handling and Table 7-2). Barriers are covered in Section 1, Fission Product Barrier Matrix. Monitor readings are also provided in EPIP-5, App. B, Note 3.
2. MC-84 0827 005 035A, MCS-2400 SED duties that can not be delegated. Section 2.0 Responsibility.
3. MC-8407 1900 3003, MSC-00701, NCO-920030222 CNTMT Rad Monitors used in conjunction with a plant parameter to determine emergency classifications. Monitor readings are included with plant parameters for the purposes of emergency classifications. Section 1, Fission Product Barrier Matrix (1.1 Fuel Clad, 1.2 RCS, 1.3 Containment), Section 7 (7.1 Gaseous Effluent, 7.2 Liquid Effluent and 7.3 Radiation Levels and 7.4 Fuel Handling).
4. ANSI Standard N.18.7-1976 Subsection 5.3.9.3: 01 POI EPIPs will contain the following elements
5. MSC-02401, NCO-920030998 Chemistry detection of failed fuel.
6. EPPOS #2 Emergency Preparedness Position (EPPOS) on timeliness of classification of emergency conditions

# FILING INSTRUCTIONS

DOCUMENT NUMBER EPIP-2

REMOVE REV 18 INSERT REV 19

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**TENNESSEE VALLEY AUTHORITY**

**WATTS BAR NUCLEAR PLANT**

**EMERGENCY PLAN IMPLEMENTING  
PROCEDURES**

**EPIP-2**

**NOTIFICATION OF UNUSUAL EVENT**

Revision 19

Unit 0

**NON-QUALITY RELATED**

PREPARED BY: Frank L. Pavlechko  
(Type Name)

SPONSORING ORGANIZATION: Emergency Planning

APPROVED BY Frank L. Pavlechko

EFFECTIVE DATE: 07/30/2002

LEVEL OF USE: REFERENCE

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### REVISION LOG

Revision Number	Implementation Date	Pages Affected	Description of Revision
8	7/5/96	4,5,6,7,8	Phone number and titles revised. Procedure (TI-30) replacement identified. All revisions were evaluated to be non-intent.
9	10/10/96	3,4,5, 8,9	The following non-intent revisions were made: SM designee identified by title, OSC and TSC support personnel instruction added, a reference was added and the non-QA record instructions revised.
CN-1	3/27/97	3,5,6	TEMA additional back-up number added.
CN-2	2/2/98	3,5,7,8	SSP-4.05 was replaced by SPP-3.5 in new procedure system. Editorial.
10	6/30/98	All	Non-Intent Change. Incorporated Change Notices 1 and 2. Changed reference SSP 3.4 to SPP 3.1.
11	10/21/99	All	Non Intent Change. Moved termination of emergency step from Appendix A to Appendix B. STD-3.2 reference canceled.
12	6/14/00	All	Non Intent Change. Revised reference number. Added backup call to the ODS should the EPS fail to operate. Added the word actions after notifications in Step 4 for clarification.
13	10/31/00	All pg. 5	Non-Intent change. Revised NRC dedicated phones from FTS-2000 to TVA phone circuits pg (RIS) 2000-11 "NRC Emergency Telecommunications Systems".
14	3/30/01	All Page 6,10	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Revised phone number. Revised initial notification form to standardize within TVAN and meet new NEI PI requirements to the NRC.
15	4/25/01	All pg. 2, 10	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Corrected typo.
16	9/25/01	All pg. 9,10	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Procedure revised to Non-Quality related per requirements of NQAP & pending revision to SPP-2.2. The coversheet and records section of the procedure was revised to reflect this change. Non-Intent change. Corrected typo on Appendix A.



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Revision Number	Implementation Date	Pages Affected	Description of Revision
17	01/24/02	All pg. 3, 5, 7	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-intent change. Added step to receive ODS confirmation call to TEMA. This standardizes with other TVAN units. Per NRC Safeguards Advisory, revised caution statement to include security adversary attack.
18	06/05/02	All 3-5 & 7	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent change(s): per NRC Recommended "Actions for Licensee Response to a Site Specific Credible Threat at Nuclear Power Plants". Revised step 8 and note(s) to require activation of the TSC/OSC for a Security Site Specific Credible Threat. Non-intent change(s): added fax number to TEMA.
19	07/30/02	All 3, 4, 5, 7, 8	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent changes made to the procedure to support the NRC Safeguards Advisory and actions associated with IN 2002-14. (ie) Added Step 8 on the two person line of site rule, and assembly and accountability requirements. Realigned steps in instruction concerning Security Site Specific Credible Threat. Added Steps 18 and 19 to enhance termination instructions. Added NRC IN 2002-14 to the references.

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## 1.0 PURPOSE

- 1.1 To provide a method for timely notification of appropriate individuals when the Shift Manager (SM) or Site Emergency Director (SED), Technical Support Center (TSC) has determined by WBN, EPIP-1 that an incident has occurred which is classified as a **NOTIFICATION OF UNUSUAL EVENT**.<sup>5</sup>
- 1.2 To provide a method for periodic reanalysis of the current situation by the SED to determine whether the **NOTIFICATION OF UNUSUAL EVENT** action(s) should be terminated, continued or upgraded to another classification.

## 2.0 RESPONSIBILITY

The SED who is initially the SM (or other SM on-site during the emergency) or designee (Unit Supervisor, US) until properly relieved by the TSC SED, has the responsibility and authority for implementation of the action(s) in this instruction.<sup>5</sup>

## 3.0 INSTRUCTIONS

- 3.1 Upon determining that existing conditions are classified as a **NOTIFICATION OF UNUSUAL EVENT** according to EPIP-1 (independent evaluations by crew members may be beneficial), the SED, or designee, will:<sup>4, 5</sup>

1. **IF** there are personnel injuries, **IMPLEMENT** EPIP-10, "Medical Emergency Response." ☐
2. **COMPLETE** Appendix A, Notification Information ☐
3. **IF** the Unusual Event declaration is based on a Credible Site Specific Security Threat Notification indicated by **EVENT 4.6** Security EALs or TSC and OSC support is needed for any other reason then **DIRECT** Shift Personnel to activate the Emergency Paging System (EPS) to staff the TSC and OSC. Shift Personnel should confirm activation and provide the 20 minute printed report to the SM for review. ☐

**NOTE 1** **IF** the EPS system fails, call the ODS, ringdown or (5-751-1700) and have him activate the EPS.

**NOTE 2** **IF** the above methods of activating the EPS fail, Shift Personnel must use the Radiological Emergency Response Call Lists to staff the TSC and OSC. This list is located in the EPS Manual near the terminal.

**CAUTION** **If there is any possibility of a radiological release or security adversary attack, do not send personnel into areas of unknown radiological conditions or security risk without first contacting Radiological Control (RADCON) or Security.**

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### 3.0 INSTRUCTIONS (continued)

4. **ANNOUNCE** to the crew: "A Notification of Unusual Event is being declared based on \_\_\_\_\_. I will be the Site Emergency Director." ☐
5. **NOTIFY** the ODS direct by ODS Ringdown or No. 5-751-1700 or 5-751-2495 and **PROVIDE** the information from Appendix A. **IF** the ODS cannot be contacted within 10 minutes, the Tennessee Emergency Management Agency is to be notified of the Radiological Emergency Plan activation by calling: 9-1-800-262-3300 or 9-1-615-741-0001 or 9-1-800-262-3400.<sup>2</sup> ☐
6. **FAX** Appendix A to the ODS. (# pre-programmed or 5-751-3400), or TEMA at 9-1-615-242-9635. ☐
7. **ANNOUNCE** to the plant, "ATTENTION ALL SITE PERSONNEL. ATTENTION ALL SITE PERSONNEL. A Notification of Unusual Event is being declared based on \_\_\_\_\_ conditions." (Repeat) ☐
8. **IF** the NOUE has been declared due to a Security EAL and Nuclear Security recommends Accountability to establish the "Two Person (Line of Sight) Rule". **Then** implement EPIP 8 for Assembly and Accountability. ☐
9. **NOTIFY** Duty Plant Manager, and **PROVIDE** Appendix A information (**SEE** duty list for telephone numbers). The Duty Plant Manager will call the Plant Manager or alternate. ☐
10. **RECEIVE** confirmation call from the ODS (to verify notification of the State of Tennessee) (NA this step, if the state was contacted directly). ☐
11. **NOTIFY** NRC, using the designated NRC phone (ENS), of plan activation. ☐

#### NOTE

NRC notification should be made as soon as practicable, within one hour of "NOTIFICATION OF UNUSUAL EVENT" declaration. Whenever NRC requests, a qualified person must provide a continuous update to the NRC Operations Center. The following commercial numbers are for the NRC Operations Center:<sup>3,6</sup>

9-1-301-816-5100 (MAIN)  
9-1-301-951-0550 (Backup)  
9-1-301-816-5151 (FAX)

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### 3.0 INSTRUCTIONS (continued)

12. **EVALUATE** the need to implement EPIP-16, "Initial Dose Assessment for Radiological Emergencies," for a dose projection if radioactivity is being released through normal plant release paths. ☐
13. **NOTIFY** WBN Emergency Preparedness. ☐

#### NOTE

Notification to Emergency Preparedness should be made as soon as practicable, but only when notification does not interfere with emergency actions or notifications in progress.

Work - 3232	or	Work - 8004 or 1838
Home - 9-1-423-337-2911		Home - 9-1-865-376-4691
Pager - 30374		Pager - 70215

14. **REEVALUATE** the event using WBN EPIP-1 as necessary to determine if conditions warrant reclassification. ☐
  - A **IF** the situation no longer exists, **TERMINATE** the emergency by informing the ODS and the Duty Plant Manager. ☐
  - B. **IF** the condition warrants upgrading to a higher classification, **INITIATE** the appropriate steps of WBN EPIPs 3, 4, or 5.
  - C. **IF** other plant conditions warrant the need for follow-up information, **COMPLETE** the Follow-up Notification Form, Appendix B and **NOTIFY** the TSC/CECC (if it is staffed), or  
  
**NOTIFY** the ODS direct by ODS Ringdown or No. 5-751-1700 or 5-751-2495 and **PROVIDE** the information. **IF** the ODS cannot be contacted within 10 minutes, the Tennessee Emergency Management Agency is to be notified of the information by calling:  
9-1-800-262-3300 or 9-1-615-741-0001 or  
9-1-800-262-3400.<sup>2</sup> ☐

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### 3.0 INSTRUCTIONS (continued)

15. **FAX** Appendix A to the ODS. (# pre-programmed or 5-751-3400), or TEMA at 9-1-615-242-9635. ☐
16. **ENSURE** applicable notifications/actions required by SPP-3.5 and SPP-3.1 have been made. ☐
17. **NOTIFY** the NRC Resident Inspector by calling 1776 and **PROVIDING** the information on Appendix A. ☐
18. **IF** the emergency no longer exist complete **Appendix B** and terminate. ☐
19. **NOTIFY** the NRC and ODS/TEMA of the termination and fax **Appendix B** to the ODS # pre-programmed or 5-571-3400 or TEMA at 9-1-615-242-9635. ☐
20. After the event is terminated, **SEND** the completed WBN EPIP-2 and associated documentation to WBN Emergency Preparedness (EP) Manager. The EP Manager shall forward documentation to DCRM for storage as appropriate. ☐

WBN	NOTIFICATION OF UNUSUAL EVENT	EPIP-2 Revision 19 Page 8 of 12
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## 4.0 REFERENCES

### 4.1 Interfacing Documents

SPP-3.1 Corrective Action Program

SPP-3.5 Regulatory Reporting Requirements

WBN-EPIP-1 Emergency Plan Classification Flowchart

WBN-EPIP-3 Alert

WBN-EPIP-4 Site Area Emergency

WBN-EPIP-5 General Emergency

WBN-EPIP-10 Medical Emergency Response

WBN-EPIP-13 Termination of the Emergency and Recovery

WBN-EPIP-14 Radiological Control Response

WBN-EPIP-16 Initial Dose Assessment for Radiological Emergencies

CECC-EPIP-9 Emergency Environmental Radiological Monitoring  
Procedures

### 4.2 Other Documents

10 CFR 50.72 Immediate Notification Requirements for Operating  
Nuclear Power Reactors

NUREG-0654, FEMA-REP-1, Rev. 1, Criteria for Preparation and  
Evaluation of Radiological Emergency Response Plans and  
Preparedness in Support of Nuclear Power Plants.

ANSI N 18.7 - 1976

NRC IN 2002-14

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## **5.0 APPENDIX**

Appendix A, Notification Information

Appendix B, Follow-up Notification Form

## **6.0 RECORDS**

### **6.1 Non QA Records**

All EPIP-2 records generated, when the REP is activated, will be stored by EP Manager for Life of Plant.

All EPIP-2 records generated during the course of a drill/exercise will be assembled by the EP Manager and stored appropriately.

<b>WBN</b>	<b>NOTIFICATION OF UNUSUAL EVENT</b>	<b>EPIP-2</b> <b>Revision 19</b> <b>Page 10 of 12</b>
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APPENDIX A (Page 1 of 1)  
**INITIAL NOTIFICATION FORM**  
**NOTIFICATION OF UNUSUAL EVENT <sup>1,4</sup>**

☐ THIS IS A REAL EVENT                      ☐ THIS IS A DRILL

This is \_\_\_\_\_.  
NAME

A **NOTIFICATION OF UNUSUAL EVENT** has been declared at Watts Bar Nuclear Plant affecting:

☐ Unit 1                      ☐ Unit 2

Event Declared:                      Time: \_\_\_\_\_                      Date: \_\_\_\_\_

EAL Designator (e.g., Fire 4.1): \_\_\_\_\_

**Brief Description of the Event:**

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**Radiological Conditions:**

- ☐ No Abnormal Releases Offsite
- ☐ Airborne Release Offsite
- ☐ Liquid Release Offsite
- ☐ Release Information Not Known at this time

☐ There is no **Protective Action Recommendation** at this time.

☐ Ask, "Please repeat the information you have received to ensure accuracy."



WBN	NOTIFICATION OF UNUSUAL EVENT	EPIP-2 Revision 19 Page 11 of 12
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APPENDIX B (Page 1 of 1)

**WBN FOLLOW-UP INFORMATION FORM**  
**NOTIFICATION OF UNUSUAL EVENT**

1. ☐ "THIS IS A REAL EVENT" or ☐ "THIS IS A DRILL."
2. "This is \_\_\_\_\_ at the Watts Bar Nuclear Plant.  
This is follow-up information regarding the Notification of Unusual Event at  
Watts Bar: Unit 1 ☐ Unit 2 ☐.
3. "Reactor: Shutdown ☐ At power ☐
4. "Plant conditions are: Stable ☐ Deteriorating ☐
5. "Follow-up information: (e.g., key events, status changes)  
\_\_\_\_\_  
\_\_\_\_\_
6. "The radiological conditions are:
  - ☐ No Abnormal Release Offsite
  - ☐ Airborne Release Offsite
  - ☐ Liquid Release Offsite
  - ☐ Release Information Not Known."
7. "Additional Rad information: (e.g., release duration)  
\_\_\_\_\_  
\_\_\_\_\_
8. ☐ "There is no Protective Action Recommendation at this time."
9. "The event terminated at \_\_\_\_\_ / \_\_\_\_\_."  
Time Date
10. ☐ "Please repeat the information you have received to ensure accuracy."
11. \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Signature Time Date

WBN	NOTIFICATION OF UNUSUAL EVENT	EPIP-2 Revision 19 Page 12 of 12
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# SOURCE NOTES

Page 1 of 1

- |  |  |
|--|--|
| 1 NRC IE Information Notice 89-89                  | Event Notification Worksheets  |
| 2 NRC IE Information Notice 86-97                  | Emergency Communications<br>System   |
| 3 NRC IE Information Notice 86-28                  | Telephone Numbers to the NRC<br>Operations Center and Regional<br>Offices.       |
| 4 MC 840827 00500 4A, MSC-02375,<br>NCO 9200 30985 | Section 3.0 Instructions, 3.1, and<br>Appendix A (Page 1 of 1).                  |
| 5 ANSI N18.7-1976<br>Subsection 5.3.9.3: 01POR     | EPIPs will contain the following<br>elements.                                    |
| 6 NRC Administrative Letter 94-04                  | Change of NRC Operation Center<br>commercial telephone and<br>facsimile numbers. |

# FILING INSTRUCTIONS

DOCUMENT NUMBER EPIP-3

REMOVE REV 21 INSERT REV 22

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**TENNESSEE VALLEY AUTHORITY**  
**WATTS BAR NUCLEAR PLANT**  
**EMERGENCY PLAN IMPLEMENTING**  
**PROCEDURES**

**EPIP-3**

**ALERT**

Revision 22

Unit 0

**NON-QUALITY RELATED**

PREPARED BY: Frank L. Pavlechko  
(Type Name)

SPONSORING ORGANIZATION: Emergency Planning

APPROVED BY: Frank L. Pavlechko

EFFECTIVE DATE: 07/30/2002

LEVEL OF USE: REFERENCE

WBN	ALERT	EPIP-3 Revision 22 Page 2 of 12
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#### REVISION LOG

Revision Number	Implementation Date	Pages Affected	Description of Revision
11	7/5/96	4,5,7,8	Phone number and titles revised. Procedure replacement (TI-30) identified. All revisions were evaluated to be non-intent
12	10/10/96	3,4,8,9	The following non-intent revisions were made: Shift Personnel replaced Shift Clerk to reflect additional personnel trained on the paging system, SM designee identified by title, a phone number added, a reference was added and the non-QA record instructions were revised.
CN-1	3/27/97	3,5,7	TEMA added alternate phone number.
CN-2	2/2/98	3, 5, 7, 8	SSP-4.05 was replaced by SPP-3.5 in new procedure system. Editorial changes.
13	6/30/98	All	Non-Intent Changes. Incorporated Change Notices 1 and 2. Changed reference SSP 3.4 to SPP 3.1.
14	10/21/99	All	Non Intent Change. Moved termination of emergency step from Appendix A to Appendix B. STD-3.2 referenced canceled.
15	06/14/00	All	Non Intent Change. Revised reference number. Added reference to the direct line to the ODS for clarification. Added the word actions after notifications in Step 19 for clarification.
16	10/31/00	All pg. 6	Non-Intent change. Revised NRC dedicated phones from FTS-2000 to TVA phone circuits per (RIS) 2000-11 "NRC Emergency Telecommunications Systems".
17	3/30/01	All Page 10	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Revised initial notification form to standardize within TVAN and meet new NEI PI requirements to the NRC.
18	4/25/01	All pg. 2, 10	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Corrected typo.
19	9/25/01	All pg. 9	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Procedure revised to Non-Quality related per requirements of NQAP & pending revision to SPP-2.2. The coversheet and records section of the procedure was revised to reflect this change.
20	01/24/02	All pg. 3, 5, 6	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-intent change. Added step to receive ODS confirmation call to TEMA. This standardizes with other TVAN units. Enhanced caution statement to include Security adversary attack. Per NRC Safeguards Advisory, moved caution step to enhance information. Changed the word Activate to Sound this makes the wording similar to EPIP 3 & 4 on step 9.

WBN	ALERT	EPIP-3 Revision 22 Page 3 of 12
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#### REVISION LOG

Revision Number	Implementation Date	Pages Affected	Description of Revision
21	06/05/02	All 3, 5 & 7	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Non-intent change(s): added fax number to TEMA.
22	07/30/02	All 3, 5, 8	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent change. Revised caution statement on assembly and accountability. Added NRC IN 2002-14 to the references.

<b>WBN</b>	<b>ALERT</b>	<b>EPIP-3</b> <b>Revision 22</b> <b>Page 4 of 12</b>
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## 1.0 PURPOSE

- 1.1 To provide a method for timely notification of appropriate individuals when the Shift Manager (SM) or Technical Support Center (TSC) Site Emergency Director (SED) has determined by WBN EPIP-1 that an incident has occurred which is classified as an ALERT.<sup>4</sup>
- 1.2 To provide a method for periodic reanalysis of the current situation by the SED to determine whether the ALERT should be terminated, continued or upgraded to another classification.

## 2.0 RESPONSIBILITY<sup>4</sup>

The SED who is initially the SM (or other SM onsite during the emergency) or designee (Unit Supervisor, US) until properly relieved by the TSC SED, has the responsibility and authority for implementation of the actions in this instruction.

## 3.0 INSTRUCTIONS<sup>4</sup>

- 3.1 Upon determining that existing conditions are classified as an ALERT according to EPIP-1 (independent evaluations by crew members may be beneficial), the SED, or designee, will:

1. **DIRECT** Shift Personnel to activate the Emergency Paging System (EPS) to staff the TSC and Operations Support Center (OSC). Shift Personnel should confirm activation and provide the 20 minute printed report to the SM for review. ☐

**NOTE 1** IF the EPS systems fails, call the ODS, ringdown or (5-751-1700) and have him activate the EPS.

**NOTE 2** IF the above methods of activating the EPS fail, the Shift Personnel must use the Radiological Emergency Response Call Lists to staff the TSC and OSC. This list is located in the EPS Manual near the terminal.

2. **COMPLETE** Appendix A, Notification Information. ☐
3. **ANNOUNCE** to the crew. "An Alert is being declared based on \_\_\_\_\_. I will be the Site Emergency Director." ☐

WBN	ALERT	EPIP-3 Revision 22 Page 5 of 12
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### 3.0 INSTRUCTIONS (continued)

4. **NOTIFY** the ODS direct by ODS Ringdown or No. 5-751-1700 or 5-751-2495 and **PROVIDE** the information from Appendix A. If the ODS cannot be contacted within 10 minutes, the Tennessee Emergency Management Agency is to be notified of the Radiological Emergency Plan activation by calling 9-1-800-262-3300 or 9-1-615-741-0001 or 9-1-800-262-3400.<sup>2</sup> ☐
5. **FAX** Appendix A to the ODS. (# pre-programmed or 5-751-3400), or TEMA. at 9-1-615-242-9635. ☐
6. **ANNOUNCE** to the plant: "ATTENTION ALL SITE PERSONNEL. ATTENTION ALL SITE PERSONNEL. An ALERT emergency has been declared based on \_\_\_\_\_ Staff the TSC and OSC." (Repeat) ☐

**CAUTION** If there is any possibility of a radiological release or security adversary attack, **HOLD** assembly and accountability actions until these conditions have been resolved. Do not send personnel into areas of unknown radiological conditions or security risk without first contacting Radiological Control (RADCON) or Security.

7. **EVALUATE** plant conditions, and IF conditions warrant, **INITIATE** assembly and accountability by. (For additional details, go to WBN EPIP-8, "Personnel Accountability and Evacuation"). IF you are not going to initiate assembly and accountability, **GO TO** step 10. ☐
8. **NOTIFY** Security (CAS) that assembly and accountability is to be conducted. ☐
9. **ANNOUNCE** to the plant: "ATTENTION ALL SITE PERSONNEL. ATTENTION ALL SITE PERSONNEL. Report to your assembly areas for accountability" (Repeat) **AND SOUND** assembly alarm for personnel assembly and accountability. **INITIATE** WBN EPIP-8, "Personnel Accountability and Evacuation."<sup>1</sup> ☐
10. **CALL** RADCON Lab and **SAY**: "We are in an Alert, implement WBN EPIP-14 and CECC EPIP-9." ☐



WBN	ALERT	EPIP-3 Revision 22 Page 6 of 12
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### 3.0 INSTRUCTIONS (continued)

11. IF there are personnel injuries, **IMPLEMENT** WBN EPIP-10, "Medical Emergency Response." ☐
12. IF there is a security threat, **IMPLEMENT** WBN EPIP-11, "Security and Access Control." ☐
13. **NOTIFY** Duty Plant Manager, and **PROVIDE** Appendix A information (SEE duty list for telephone numbers). The Duty Plant Manager will call the Plant Manager or his alternate. ☐
14. **EVALUATE** the need to implement EPIP-16, "Initial Dose Assessment for Radiological Emergencies," for a dose projection if radioactivity is being released through normal plant release paths. ☐
15. **RECEIVE** confirmation call from the ODS ( to verify notification of the State of Tennessee) (NA this step, if the state was contacted directly). ☐
16. **NOTIFY** the NRC, using designated NRC phone (ENS), of plan activation. ☐

**NOTE** NRC notification should be made as soon as practicable but within one hour of "ALERT" declaration. Whenever NRC requests, a qualified person must provide a continuous update to NRC Operations Center. The following commercial numbers are for the NRC Operations Center.<sup>3,5</sup>

9-1-301-816-5100 (MAIN)  
9-1-301-951-0550 (BACKUP)  
9-1-301-816-5151 (FAX)

17. **NOTIFY** the NRC Resident Inspector by calling 1776 and **PROVIDING** the information on Appendix A. ☐

WBN	ALERT	<b>EPIP-3</b> <b>Revision 22</b> <b>Page 7 of 12</b>
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### 3.0 INSTRUCTIONS (continued)

18. **REEVALUATE** conditions using WBN EPIP-1 as necessary. ☐
  - A. **IF** the conditions are under control, **INITIATE** actions identified in WBN EPIP-13, "Termination of the Emergency and Recovery."
  - B. **IF** the conditions warrant upgrading to a higher classification, **INITIATE** the appropriate steps of WBN EPIP-4 or EPIP-5.
  - C. **IF** other plant conditions warrant the need for followup information, **COMPLETE** the Followup Notification Form, Appendix B, and **NOTIFY** the TSC/CECC (if it is staffed) or,

**NOTIFY** the ODS direct by ODS Ringdown or No. 5-751-1700 or 5-751-2495 and **PROVIDE** the information. **IF** the ODS cannot be contacted within 10 minutes, the Tennessee Emergency Management Agency is to be notified of the information by calling:  
9-1-800-262-3300 or 9-1-615-741-0001 or 9-1-800-262-3400<sup>2</sup>
19. **FAX** Appendix A to the ODS. ☐  
(# pre-programmed or 5-751-3400), or TEMA at 9-1-615-242-9635.
20. **ENSURE** applicable notifications/actions required by SPP-3.5 and SPP-3.1 have been made. ☐
21. **SEND** the completed WBN EPIP-3 and associated documentation to the Emergency Preparedness (EP) Manager. The EP Manager shall forward documentation to DCRM for storage as appropriate. ☐

<b>WBN</b>	<b>ALERT</b>	<b>EPIP-3</b> <b>Revision 22</b> <b>Page 8 of 12</b>
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#### **4.0 REFERENCES**

##### **4.1 Interfacing Documents**

*SPP-3.5 Regulatory Reporting Requirements*

*SPP-3.1 Corrective Action Program*

*WBN-EPIP-1 Emergency Plan Classification Flowchart*

*WBN-EPIP-2 Notification of Unusual Event*

*WBN-EPIP-4 Site Area Emergency*

*WBN-EPIP-5 General Emergency*

*WBN-EPIP-10 Medical Emergency Response*

*WBN-EPIP-11 Security and Access Control*

*WBN-EPIP-13 Termination of the Emergency and Recovery*

*WBN-EPIP-16 Initial Dose Assessment for Radiological Emergencies*

*CECC-EPIP-9 Emergency Environmental Radiological Monitoring Procedures*

##### **4.2 Other Documents**

*10 CFR 50.72 Immediate Notification Requirements for Operating Nuclear Power Reactors*

*NUREG 0654, FEMA-REP-1, Rev. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.*

*ANSI N18.7-1976*

*NRC INFORMATION NOTICE 2002-14*

*CECC-EPIP-8 Dose Assessment Staff Activities During Nuclear Plant Radiological Emergencies*

<b>WBN</b>	<b>ALERT</b>	<b>EPIP-3</b> <b>Revision 22</b> <b>Page 9 of 12</b>
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## **5.0 APPENDIX**

Appendix A, Notification Information

Appendix B, Followup Notification Form

## **6.0 RECORDS**

### **6.1 Non QA Records**

All EPIP-3 records generated, when the REP is activated, will be stored by EP Manager for Life of Plant.

All EPIP-3 records generated during the course of a drill/exercise will be assembled by the EP Manager and stored appropriately..

<b>WBN</b>	<b>ALERT</b>	<b>EPIP-3</b> <b>Revision 22</b> <b>Page 10 of 12</b>
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APPENDIX A (Page 1 of 1)  
**INITIAL NOTIFICATION FORM<sup>1</sup>**  
**ALERT**

☐ **THIS IS A REAL EVENT**

☐ **THIS IS A DRILL**

This is \_\_\_\_\_  
NAME

An **ALERT** has been declared at Watts Bar Nuclear Plant affecting:

☐ Unit 1

☐ Unit 2

**Event Declared:**                      **Time:** \_\_\_\_\_                      **Date:** \_\_\_\_\_

**EAL Designator (e.g., Fire 4.1):** \_\_\_\_\_

**Brief Description of the Event:**

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**Radiological Conditions:**

- ☐ No Abnormal Releases Offsite
- ☐ Airborne Release Offsite
- ☐ Liquid Release Offsite
- ☐ Release Information Not Known at this time

☐ **There is no Protective Action Recommendation at this time.**

☐ Ask "Please repeat the information you have received to ensure accuracy."

WBN	ALERT	EPIP-3 Revision 22 Page 11 of 12
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APPENDIX B (Page 1 of 1)

**WBN FOLLOWUP INFORMATION FORM**  
**ALERT**

1. ☐ "THIS IS A REAL EVENT" or ☐ "THIS IS A DRILL."
2. "This is \_\_\_\_\_ at the Watts Bar Nuclear Plant.  
This is followup information regarding the Alert at Watts Bar:  
Unit 1 ☐ Unit 2 ☐.
3. "Reactor: Shutdown ☐ At power ☐
4. "Plant conditions are: Stable ☐ Deteriorating ☐
5. "Followup information: (e.g., key events, status changes) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ "
6. "Site Assembly and Accountability is ongoing: Yes ☐ No ☐
7. "The radiological conditions are:  
  
☐ No Abnormal Release Offsite  
  
☐ Airborne Release Offsite  
  
☐ Liquid Release Offsite  
  
☐ Release Information Not Known."
8. "Additional Rad information: (e.g., release duration) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ "
9. ☐ "There is no Protective Action Recommendation at this time."
10. "The event terminated at \_\_\_\_ / \_\_\_\_."  
Time Date
11. ☐ "Please repeat the information you have received to ensure accuracy."
12. \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Signature Time Date

WBN	ALERT	EPIP-3 Revision 22 Page 12 of 12
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SOURCE NOTES  
Page 1 of 1

- 1 NRC IE Information Notice No. 89-89 *Event Notification Worksheets*
- 2 NRC IE Information Notice No. 86-97 *Emergency Communications System*
- 3 NRC IE Information Notice No. 86-28 *Telephone Numbers to the NRC Operations Center and Regional Offices*
- 4 ANSI N18.7-1976  
Subsection 5.3.9.3: 01POI *EPIPs will contain the following elements.*
- 5 NRC Administrative Letter 94-04 *Change of NRC Operations Center commercial telephone and facsimile numbers.*

# FILING INSTRUCTIONS

DOCUMENT NUMBER EPJP-4

REMOVE REV 22      INSERT REV 23

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**TENNESSEE VALLEY AUTHORITY**

**WATTS BAR NUCLEAR PLANT**

**EMERGENCY PLAN IMPLEMENTING  
PROCEDURES**

**EPIP-4**

**SITE AREA EMERGENCY**

Revision 23

Unit 0

**NON-QUALITY RELATED**

PREPARED BY: Frank L. Pavlechko  
(Type Name)

SPONSORING ORGANIZATION: Emergency Planning

APPROVED BY: Frank L. Pavlechko

EFFECTIVE DATE: 07/30/2002

LEVEL OF USE: REFERENCE

WBN	SITE AREA EMERGENCY	EPIP-4 Revision 23 Page 2 of 12
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### REVISION DESCRIPTION

Revision Number	Implementation Date	Pages Affected	Description of Revision
CN-1	9/28/95	5	Revised phone numbers. Editorial (non-intent) changes made.
11	7/5/96	4,5,7,8	Phone number and titles revised. Procedure replacement (TI-30) identified. All revisions were evaluated to be non-intent.
12	10/10/96	3,4,5,8,9,10	The following non-intent revisions were made: Shift Personnel replaced Shift Clerk to reflect additional personnel trained on the paging system, SM designee identified by title, a phone number was added, assembly and accountability instruction enhanced, a reference was added, the non-QA record instructions were revised, and wind speed and direction were added to the initial notification form per TEMA request.
CN-1	3/27/97	3,5,6,7	TEMA additional back-up number added, changed county primary and back-up numbers
CN-2	7/31/97	3,5	Phone number change.
CN-3	2/2/98	3,5,7,8	SSP-4.05 was replaced by SPP-3.5. Editorial change.
13	6/30/98	All	Non-intent changes. Incorporated Changes Notices 1, 2 and 3. Changed reference SSP 3.4 to SPP 3.1.
14	10/21/99	All	Non-intent change. Moved termination of emergency step from Appendix A to Appendix B. STD-3.2 reference canceled.
15	02/08/00	ALL	Non- Intent change. Phone numbers revised.
16	06/14/00	All	Non Intent change. Reference number revised. Phone number revised. Added the word actions after notifications in Step 17 for clarification. Added reference to the ODS, direct line for clarification. This revision resolves problem identified in WBN PER, 006394.
17	10/31/00	All pg. 6	Non-Intent change. Revised NRC dedicated phones from FTS-2000 to TVA phone circuits per (RIS) 2000-11 "NRC Emergency Telecommunications Systems".
18	3/30/01	All Page 5,10	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Revised phone numbers. Revised initial notification form to standardize within TVAN and meet new NEI PI requirements to the NRC.
19	4/25/01	All pg. 2, 10	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Corrected typo.
20	9/25/01	All pg. 9	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Procedure revised to Non-Quality related per requirements of NQAP & pending revision to SPP-2.2. The coversheet and records section of the procedure was revised to reflect this change.
21	01/24/02	All pg.3, 5, 6	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-intent change. Added step to receive ODS confirmation call to TEMA\Local Counties. This standardizes with other TVAN Units. Per NRC Safeguards Advisory, enhanced caution statement to include Security adversary attack.

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 3 of 12</b>
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<b>Revision Number</b>	<b>Implementation Date</b>	<b>Pages Affected</b>	<b>Description of Revision</b>
22	06/05/02	All 3, 5 & 7	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent change(s) : removed county EPZ phone numbers per direction from Tennessee Emergency Management Agency (TEMA). Non-intent change(s): added fax number to TEMA.
23	07/30/02	All 3, 5, 7, 8	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent change(s): Revised caution statement on assembly and accountability. Added Step 16 on evacuation of non emergency responders. Added NRC IN 2002-14 to the references.

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 4 of 12</b>
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## **1.0 PURPOSE<sup>4</sup>**

- 1.1 To provide a method for timely notification of appropriate individuals when the Shift Manager (SM) or Technical Support Center (TSC) SED has determined by WBN EPIP-1 that an incident has occurred which is classified as a SITE AREA EMERGENCY.
- 1.2 To provide a method for periodic reanalysis of the current situation by the SED to determine whether the SITE AREA EMERGENCY should be terminated, continued or upgraded to a General Emergency.

## **2.0 RESPONSIBILITY<sup>4</sup>**

The SED who is initially the SM (or other SM onsite during the emergency) or designee (Unit Supervisor, US) until properly relieved by the TSC SED, has the responsibility and authority for implementation of the actions in this instruction.

## **3.0 INSTRUCTIONS**

- 3.1 Upon determining that existing conditions are classified as a SITE AREA EMERGENCY according to WBN EPIP-1 (independent evaluations by crew members may be beneficial), the SED, or designee, will:<sup>4</sup>
  1. **DIRECT** the Shift Personnel to activate the Emergency Paging System (EPS) to staff the TSC and Operations Support Center (OSC). Shift Personnel should confirm activation and provide the 20 minute printed report to the SM for review. □

**NOTE 1** IF the EPS system fails, call the ODS, ringdown or (5-751-1700) and have him activate the EPS.

**NOTE 2** IF the above methods of activating the EPS fail, Shift Personnel must use the Radiological Emergency Response Call Lists to staff the TSC and OSC. This list is located in the EPS Manual near the terminal.

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 5 of 12</b>
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### 3.0 INSTRUCTIONS (continued)

2. **COMPLETE** Appendix A Notification Information. ☐
3. **ANNOUNCE** to the crew: "A Site Area Emergency is being declared based on \_\_\_\_\_. I will be the Site Emergency Director, all support and job assignments must be authorized through me." ☐
4. **NOTIFY** the ODS direct by ODS Ringdown or No. 5-751-1700 or 5-751-2495 and **PROVIDE** the information from Appendix A. ☐  
  

IF the ODS cannot be contacted within 10 minutes, the Tennessee Emergency Management Agency is to be notified of the Radiological Emergency Plan activation by calling 9-1-800-262-3300 or 9-1-615-741-0001 or 9-1-800-262-3400.
5. **FAX** Appendix A to the ODS. (# pre-programmed or 5-751-3400), or TEMA at 9-1-615-242-9635. ☐

**CAUTION** If there is any possibility of a radiological release or security adversary attack, **HOLD** assembly and accountability actions until these conditions have been resolved. Do not send personnel into areas of unknown radiological conditions or security risk without first contacting Radiological Control (RADCON) or Security.

6. **NOTIFY** Security (CAS) that assembly and accountability is to be conducted. ☐

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 6 of 12</b>
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### 3.0 INSTRUCTIONS (continued)

7. **ANNOUNCE** to the plant: "ATTENTION ALL SITE PERSONNEL. ATTENTION ALL SITE PERSONNEL. A SITE AREA EMERGENCY has been declared based on \_\_\_\_\_. All personnel report to your assembly areas for accountability. Staff the TSC and OSC." (Repeat)  
**SOUND** assembly alarm **AND** **INITIATE** WBN EPIP-8, "Personnel Accountability and Evacuation." ☐
8. **CALL** RADCON Lab and **SAY**: "We are in a Site Area Emergency, implement WBN EPIP-14 and CECC EPIP-9." ☐
9. **IF** there are personnel injuries, **IMPLEMENT** WBN EPIP-10, "Medical Emergency Response". ☐
10. **IF** there is a security threat, **IMPLEMENT** WBN EPIP-11, "Security and Access Control". ☐
11. **NOTIFY** Duty Plant Manager, and **PROVIDE** Appendix A information (SEE duty list for telephone numbers). The Duty Plant Manager will call the Plant Manager or alternate. ☐
12. **EVALUATE** the need to implement EPIP-16, "Initial Dose Assessment for Radiological Emergencies," for a dose projection if radioactivity is being released through normal plant release paths. ☐
13. **RECEIVE** confirmation call from the ODS (to verify notification of the State of Tennessee/local counties.) (NA this step, if the state/counties were contacted directly). ☐
14. **NOTIFY** the NRC, using designated NRC phone (ENS), of plan activation. ☐

**NOTE** NRC notification should be made as soon as practicable, within one hour of "SITE AREA EMERGENCY" declaration. Whenever NRC requests, a qualified person must provide a continuous update to NRC Operations Center. The following commercial numbers are for the NRC Operations Center:<sup>3,5</sup>

9-1-301-816-5100 (MAIN)  
9-1-301-951-0550 (BACKUP)  
9-1-301-816-5151 (FAX)

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 7 of 12</b>
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### 3.0 INSTRUCTIONS (continued)

15. **NOTIFY** the NRC Resident Inspector by calling 1776 and **PROVIDING** the information on Appendix A. ☐
16. Once Assembly and Accountability has been **COMPLETED**, review EPIP 8, Appendix G for actions associated with the evacuation of non-emergency responders. **IF** this action has already been initiated, disregard. ☐
17. **REEVALUATE** conditions using WBN EPIP-1 as necessary.
  - A. **IF** the conditions are under control, **INITIATE** actions identified in WBN EPIP-13, "Termination of the Emergency and Recovery."
  - B. **IF** conditions warrant upgrading to a higher classification, **INITIATE** the appropriate steps of WBN EPIP-5.
  - C. **IF** other plant conditions warrant the need for followup information, **COMPLETE** the Followup Notification Form, Appendix B, and **NOTIFY** the TSC/CECC (if it is staffed) or,
 

**NOTIFY** the ODS direct by ODS Ringdown or No. 5-751-1700 or 5-751-2495 and **PROVIDE** the information. **IF** the ODS cannot be contacted within 10 minutes, the Tennessee Emergency Management Agency is to be notified of the information by calling 9-1-800-262-3300 or 9-1-615-741-0001 or 9-1-800-262-3400<sup>2</sup>
18. **FAX** Appendix A to the ODS. (# pre-programmed or 5-751-3400), or TEMA at 9-1-615-242-9635. ☐
19. **ENSURE** applicable notifications/actions required by SPP-3.5 and SPP-3.1 have been made. ☐
20. **SEND** the completed WBN EPIP-4 and associated documentation to the Emergency Preparedness (EP) Manager. The EP Manager shall forward documentation to DCRM for storage as appropriate. ☐

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 8 of 12</b>
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#### **4.0 REFERENCES**

##### **4.1 Interfacing Documents**

*SPP-3.1 Corrective Action Program*

*SPP-3.5 Regulatory Reporting Requirements*

*WBN-EPIP-1 Emergency Plan Classification Flowchart*

*WBN-EPIP-2 Notification of Unusual Event*

*WBN-EPIP-3 Alert*

*WBN-EPIP-5 General Emergency*

*WBN-EPIP-10 Medical Emergency Response*

*WBN-EPIP-11 Security and Access Control*

*WBN-EPIP-13 Termination of the Emergency and Recovery*

*WBN-EPIP-16 Initial Dose Assessment for Radiological Emergencies*

*CECC-EPIP-9 Emergency Environmental Radiological Monitoring Procedures*

##### **4.2 Other Documents**

*10 CFR 50.72 Immediate Notification Requirements for Operating Nuclear Power Reactors*

*NUREG 0654, FEMA-REP-1, Rev. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.*

*ANSI 18.7-1976*

*NRC INFORMATION NOTICE 2002-14*

*CECC-EPIP-8 Dose Assessment Staff Activities During Nuclear Plant Radiological Emergencies*



<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 9 of 12</b>
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## **5.0 APPENDIX**

Appendix A, Notification Information

Appendix B, Followup Notification Form

## **6.0 RECORDS**

### **6.1 Non QA Records**

All EPIP-4 records generated, when the REP is activated, will be stored by EP Manager for Life of Plant.

All EPIP-4 records generated during the course of a drill/exercise will be assembled by the EP Manager and stored appropriately.

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 10 of 12</b>
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APPENDIX A (Page 1 of 1)  
INITIAL NOTIFICATION FORM <sup>1</sup>  
SITE AREA EMERGENCY

☐ THIS IS A REAL EVENT

☐ THIS IS A DRILL

This is \_\_\_\_\_  
NAME

An **SITE AREA EMERGENCY** has been declared at Watts Bar Nuclear Plant affecting:

☐ Unit 1

☐ Unit 2

Event Declared: Time: \_\_\_\_\_ Date: \_\_\_\_\_

EAL Designator (e.g., loss of AC 3.1): \_\_\_\_\_

Brief Description of the Event:

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**Radiological Conditions:**

- ☐ No Abnormal Releases Offsite
- ☐ Airborne Release Offsite
- ☐ Liquid Release Offsite
- ☐ Release Information Not Known at this time

☐ There is no Protective Action Recommendation at this time.

**Meteorological conditions are:**

Wind Speed: \_\_\_\_\_ m.p.h.  
Wind Direction From: \_\_\_\_\_ degrees

☐ Ask "Please repeat the information you have received to ensure accuracy."

WBN	SITE AREA EMERGENCY	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 11 of 12</b>
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APPENDIX B (Page 1 of 1)

**WBN FOLLOWUP INFORMATION FORM**  
**SITE AREA EMERGENCY**

1. ☐ "THIS IS A REAL EVENT" or ☐ "THIS IS A DRILL."
2. "This is \_\_\_\_\_ at the Watts Bar Nuclear Plant.  
This is followup information regarding the Site Area Emergency at Watts Bar:  
Unit 1 ☐ Unit 2 ☐."
3. "Reactor: Shutdown ☐ At power ☐ "
4. "Plant conditions are: Stable ☐ Deteriorating ☐ "
5. "Followup information: (e.g., key events, status changes) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ "
6. "Onsite assembly and accountability is ongoing: Yes ☐ No ☐ "
7. "The radiological conditions are:  
☐ No Abnormal Release Offsite  
☐ Airborne Release Offsite  
☐ Liquid Release Offsite  
☐ Release Information Not Known."
8. "Additional Rad information: (e.g., release duration) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ "
9. "The meteorological conditions are: Wind speed: \_\_\_\_\_ Wind direction  
from: \_\_\_\_\_ "
10. ☐ "There is no Protective Action Recommendation at this time."
11. "The event terminated at \_\_\_\_ / \_\_\_\_."  
Time Date
12. ☐ "Please repeat the information you have received to ensure accuracy."
13. \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Signature Time Date

<b>WBN</b>	<b>SITE AREA EMERGENCY</b>	<b>EPIP-4</b> <b>Revision 23</b> <b>Page 12 of 12</b>
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# **SOURCE NOTES**

Page 1 of 1

- 1 NRC IE Information Notice No. 89-89 Event Notification Worksheets
- 2 NRC IE Information Notice No. 86-97 Emergency Communications System
- 3 NRC IE Information Notice No. 86-28 Telephone Numbers to the NRC Operations Center and Regional Offices
- 4 ANSI 18.7-1976,  
Subsection, 5.3.9.3: 01POI EIPs will contain the following elements.
- 5 NRC Administrative Letter 94-04 Change of NRC Operations Center commercial telephone and facsimile numbers.

# FILING INSTRUCTIONS

DOCUMENT NUMBER EPIP- 5

REMOVE REV 23      INSERT REV 24

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**TENNESSEE VALLEY AUTHORITY**

**WATTS BAR NUCLEAR PLANT**

**EMERGENCY PLAN IMPLEMENTING  
PROCEDURES**

**EPIP-5**

**GENERAL EMERGENCY**

Revision 24

Unit 0

**NON-QUALITY RELATED**

PREPARED BY: Frank L Pavlechko  
(Type Name)

SPONSORING ORGANIZATION: Emergency Planning

APPROVED BY: Frank L Pavlechko

EFFECTIVE DATE: 07/30/2002

LEVEL OF USE: REFERENCE

WBN	GENERAL EMERGENCY	EPIP-5 Revision 24 Page 2 of 12
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# REVISION LOG

Revision Number	Implementation Date	Pages Affected	Description of Revision
CN-1	9/28/95	3,5,11	Revised phone numbers. Editorial (non-intent) changes made. All references to RM were changed to RE to make it consistent with site description documents.
11	7/5/96	4,5,6,7,8	Phone number and titles revised. Procedure replacement (TI-30) identified. All revisions were evaluated to be non-intent.
12	10/10/96	3,4,5,8,9	The following non-intent revisions were made: Shift Personnel replaced Shift Clerk to reflect additional personnel trained on the paging system, SM designee identified by title, a phone number was added, assembly and accountability instruction enhanced, a reference was added, and the non-QA record instructions were revised.
CN-1	3/27/97	3,5,6	TEMA additional back-up number added, counties changed phone numbers
CN-2	2/2/98	3,5,6,7,8	SSP-4.05 was replaced by SPP-3.5. Editorial changes were made.
13	6/30/98	All	Non-intent Changes. Incorporated Change Notices 1 and 2. Changed reference SSP 3.4 to SPP 3.1.
14	10/21/99	All	Non-intent change. Moved termination step from Appendix A to Appendix C. STD-3.2 reference canceled.
15	02/08/00	All	Non-intent change. Revised phone number.
16	6/14/00	All	Non Intent change. Revised phone number. Reference number revised. Added reference to the ODS, direct line for clarification. Added the work actions after notifications in Step 17 for clarification. This revision resolves problem identified in WBN PER, 006394.
17	08/16/00	All (Pg. 3, 11)	Intent change. Revised CNTMT Rad Monitors (1-RE-90-271, 272, 273, & 274) readings to correspond with the new TI-RPS-162, "Response of the Primary Containment High Range Monitors" readings (Reference EDC-50600). This analysis resulted in a revision to Table 2 on the PAR Chart. This revision resolves action items from CORP PER-99-000038-000. This revision was also determined not to reduce the level of effectiveness of the procedure or REP.
18	10/31/00	All pg. 6	Non-Intent change. Revised NRC dedicated phones from FTS-2000 to TVA phone circuits per (RIS) 2000-11 "NRC Emergency Telecommunications Systems".
19	3/30/01	All	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Re-paginated. Revised phone numbers. Revised initial notification form to standardize within TVAN and meet new NEI PI requirements to the NRC. Revised PAR chart to meet requirements of RTM 96 Vol. 1 Rev. 4. Revised follow-up form to reflect changes in PAR chart.
20	4/25/01	All pg. 2, 9	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-Intent change. Corrected typo.

<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 3 of 12</b>
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<b>Revision Number</b>	<b>Implementation Date</b>	<b>Pages Affected</b>	<b>Description of Revision</b>
21	09/25/01	All pg.8	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Procedure revised to Non-Quality related per requirements of NQAP & pending revision to SPP-2.2. The coversheet and records section of the procedure was revised to reflect this change.
22	01/24/02	All pg. 3, 5, 6	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Non-intent change. Added step to receive ODS confirmation call to TEMA \Local Counties. This standardizes with other TVAN Units. Per NRC Safeguards Advisory, enhanced caution statement to include Security adversary attack.
23	06/05/02	All 3, 5 & 7	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Non-intent change(s): added fax number to TEMA.
24	07/30/02	All 3, 5, 6, 8	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP. Intent Change. Revised caution statement on assembly and accountability. Added Step 16 on Evacuation of Non Emergency Responders. Added NRC IN 2002-14 to the references.



<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 4 of 12</b>
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## 1.0 PURPOSE

- 1.1 To provide a method for timely notification of appropriate individuals when the Shift Manager (SM) or Technical Support Center (TSC) Site Emergency Director (SED) has determined by WBN EPIP-1 that an incident has occurred which is classified as a GENERAL EMERGENCY.<sup>11</sup>
- 1.2 To provide a method for periodic reanalysis of the current situation by the SED to determine whether the GENERAL EMERGENCY should be terminated or continued.

## 2.0 RESPONSIBILITY

The SED who is initially the SM (or other SM onsite during the emergency) or designee (Unit Supervisor, US) until properly relieved by the TSC SED, has the responsibility and authority for implementation of the actions in this instruction.<sup>10,11</sup>

## 3.0 INSTRUCTIONS

- 3.1 Upon determining that existing conditions are classified as a GENERAL EMERGENCY according to WBN EPIP-1 (independent evaluations by crew members may be beneficial), the SED, or designee, will:<sup>11</sup>

- ☐ 1. **DIRECT** Shift Personnel to activate the Emergency Paging System (EPS) to staff the TSC and Operations Support Center (OSC). Shift Personnel should confirm activation and provide the 20 minute printed report to the SM for review.

**NOTE 1** IF the EPS system fails, call the ODS ringdown or (5-571-1700) and have him activate the EPS.

**NOTE 2** IF the above methods of activating the EPS fail, Shift Personnel must use the Radiological Emergency Response Call Lists to staff the TSC and OSC. This list is located in the EPS Manual near the terminal.

- ☐ 2. **COMPLETE** Appendix A and B, Notification Information.

- ☐ 3. **ANNOUNCE** to the crew: "A General Emergency is being declared based on \_\_\_\_\_. I will be the Site Emergency Director, all support and job assignments must be authorized through me."

<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 5 of 12</b>
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### 3.0 INSTRUCTIONS (continued)

**CAUTION** If there is any possibility of a radiological release or security adversary attack, **HOLD** assembly and accountability actions until these conditions have been resolved. Do not send personnel into areas of unknown radiological conditions or security risk without first contacting Radiological Control (RADCON) or Security.

- ☐ 4. IF Assembly Alarm has not been activated, **NOTIFY** Security (CAS) that assembly and accountability is to be conducted. **SOUND** the assembly alarm **AND INITIATE** WBN EPIP-8, "Personnel Accountability and Evacuation".

- ☐ 5. **ANNOUNCE** to the plant: "ATTENTION ALL SITE PERSONNEL. ATTENTION ALL SITE PERSONNEL. A GENERAL EMERGENCY has been declared based on \_\_\_\_\_."

All plant personnel report to assembly areas for accountability. Staff the TSC and OSC." (Repeat)

- ☐ 6. **NOTIFY** the ODS direct by ODS Ringdown or 5-751-1700 or 5-751-2495 and **PROVIDE** the information from Appendix A.

IF the ODS cannot be contacted within 10 minutes, then directly notify Rhea County, Meigs County, McMinn County, and the Tennessee Emergency Management Agency (TEMA) of the classification.

Rhea County EMA	9-775-2505	_____(TIME)
(Alternate)	9-775-7828	_____(TIME)
Meigs County EMA	9-1-423-334-3211	_____(TIME)
(Alternate)	9-1-423-334-5268	_____(TIME)
McMinn County EMA	9-1-423-744-2724	_____(TIME)
(Alternate)	9-1-423-744-2721	_____(TIME)
Tennessee EMA	9-1-800-262-3300	_____(TIME)
(Alternate)	9-1-615-741-0001	_____(TIME)
(Alternate)	9-1-800-262-3400	_____(TIME)

- ☐ 7. **FAX** Appendix A to the ODS. (# pre-programmed or 5-751-3400) , or TEMA at 9-1-615-242-9635.

- ☐ 8. **CALL** RADCON Lab and **SAY**: "We are in a General Emergency, implement WBN EPIP-14 and CECC EPIP-9."

- ☐ 9. IF there are personnel injuries, **IMPLEMENT** EPIP-10, "Medical Emergency Response".

<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 6 of 12</b>
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### 3.0 INSTRUCTIONS (continued)

- ☐ 10 **IF** there is a security threat, **IMPLEMENT** EPIP-11, "Security and Access Control".
- ☐ 11. **NOTIFY** Duty Plant Manager, and **PROVIDE** the Appendix A information (**SEE** duty list for telephone numbers). The Duty Plant Manager will call the Plant Manager or his alternate.
- ☐ 12. **EVALUATE** the need to implement EPIP-16, "Initial Dose Assessment for Radiological Emergencies," for a dose projection if radioactivity is being released through normal plant release paths.
- ☐ 13. **RECEIVE** confirmation call from the ODS (to verify notification of the State of Tennessee/local counties.) (NA this step, if the state/counties were contacted directly).
- 14. **NOTIFY** the NRC by the NRC designated phone (ENS) of plan activation.

**NOTE** NRC notification should be made as soon as practicable, but within one hour of "GENERAL EMERGENCY" declaration. Whenever NRC requests, a qualified person must provide a continuous update to NRC Operations Center. The following commercial numbers are for the NRC Operations Center:<sup>3,13</sup>

9-1-301-816-5100 (MAIN)  
9-1-301-951-0550 (BACKUP)  
9-1-301-816-5151 (FAX)

- ☐ 15. **NOTIFY** NRC Resident Inspector by **CALLING** 1776 and **PROVIDING** the information on Appendix A.
- ☐ 16. Once Assembly and Accountability has been **COMPLETED**, review EPIP 8, Appendix G for actions associated with the evacuation of non-emergency responders. **IF** this action has already been initiated, disregard.
- ☐ 17. **REEVALUATE** conditions using WBN EPIP-1 as necessary. **IF** conditions are under control, **INITIATE** actions identified in WBN EPIP-13, "Termination of the Emergency and Recovery."
- ☐ **IF** other plant conditions warrant the need for followup information, **COMPLETE** the Followup Notification Form, Appendix C, and **NOTIFY** the TSC/CECC (if it is staffed) or  
  
**NOTIFY** the ODS direct by ODS Ringdown or No. 5-751-1700 or 5-751-2495 and **PROVIDE** the information.  
**IF** the ODS cannot be contacted within 10 minutes, the Tennessee Emergency Management Agency is to be notified of the information by calling 9-1-800-262-3300 or 9-1-615-741-0001 or 9-1-800-262-3400.<sup>2</sup>

<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 7 of 12</b>
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### 3.0 INSTRUCTIONS (continued)

- ☐ 18. **FAX** Appendix A to the ODS. (# pre-programmed or 5-751-3400) , or TEMA at 9-1-615-242-9635.
- ☐ 19. **ENSURE** applicable notifications/actions required by SPP-3.5 and SPP-3.1 have been made.
- ☐ 20. **SEND** the completed WBN EPIP-5 and associated documentation to the Emergency Preparedness (EP) Manager. The EP Manager shall forward documentation to DCRM for storage as appropriate.

### 4.0 REFERENCES

#### 4.1 Interfacing Documents

SPP-3.5 *Regulatory Reporting Requirements*

SPP-3.1 *Corrective Action Program*

WBN-EPIP-1 *Emergency Plan Classification Flowchart*

WBN-EPIP-2 *Notification of Unusual Event*

WBN-EPIP-3 *Alert*

WBN-EPIP-4 *Site Area Emergency*

WBN-EPIP-10 *Medical Emergency Response*

WBN-EPIP-11 *Security and Access Control*

WBN-EPIP-13 *Termination of the Emergency and Recovery*

WBN-EPIP-16 *Initial Dose Assessment for Radiological Emergencies*

CECC-EPIP-9 *Emergency Environmental Radiological Monitoring Procedures*

<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 8 of 12</b>
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#### 4.2 Other Documents

Response Technical Manual (RTM) 96 Vol. 1, Rev. 4

10 CFR 50.72 *Immediate Notification Requirements for Operating Nuclear Power Reactors*

NUREG 0654, FEMA-REP-1, Rev. 1, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.*

ANSI N18.7-1976

NRC INFORMATION NOTICE 2002-14

10 CFR 20, *Standards for Protection From Radiation*

EPA 400-R-92-001, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*

*Implementation of New EAL Protective Action Guides and Protective Actions for Nuclear Incidents*

CECC-EPIP-8 *Dose Assessment Staff Activities During Nuclear Plant Radiological Emergencies*

#### 5.0 APPENDICES

Appendix A, Notification Information

Appendix B, Protective Action Recommendation Guidance

Appendix C, Follow-up Information Form

#### 6.0 RECORDS

##### 6.1 Non QA Records

All EPIP-5 records generated, when the REP is activated, will be stored by EP Manager for Life of Plant.

All EPIP-5 records generated during the course of a drill/exercise will be assembled by the EP Manager and stored appropriately.

<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 9 of 12</b>
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APPENDIX A (Page 1 of 1)  
INITIAL NOTIFICATION FORM <sup>1,8</sup>  
GENERAL EMERGENCY

☐ THIS IS A REAL EVENT      ☐ THIS IS A DRILL

This is \_\_\_\_\_  
NAME

There has been a **GENERAL EMERGENCY** declared at Watts Bar Nuclear affecting:

☐ Unit 1      ☐ Unit 2

Event Declared:      Time: \_\_\_\_\_      Date: \_\_\_\_\_

EAL Designator (e.g., Fission Product Barrier Matrix): \_\_\_\_\_

Brief Description of the Event:

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**Radiological Conditions:**

- ☐ No Abnormal Releases Offsite
- ☐ Airborne Release Offsite
- ☐ Liquid Release Offsite
- ☐ Release Information Not Known at this time

**The following Protective Action Recommendation is provided**

- ☐ Recommendation 1 - Evacuate 2 mile radius and 10 miles downwind and shelter remainder of 10 mile EPZ.
- ☐ Recommendation 2 - Evacuate 2 mile radius and 5 miles downwind and shelter remainder of 10 mile EPZ.

**Meteorological Conditions are:**

Wind Speed: \_\_\_\_\_ m.p.h.  
Wind Direction From: \_\_\_\_\_ degrees

☐ Ask, "Please repeat the information you have received to ensure accuracy."

APPENDIX B  
(Page 1 of 1)

PROTECTIVE ACTION RECOMMENDATION <sup>4,5,6,7,8,9,12</sup>

Note 1: If conditions are unknown utilizing the flowchart, then answer NO.

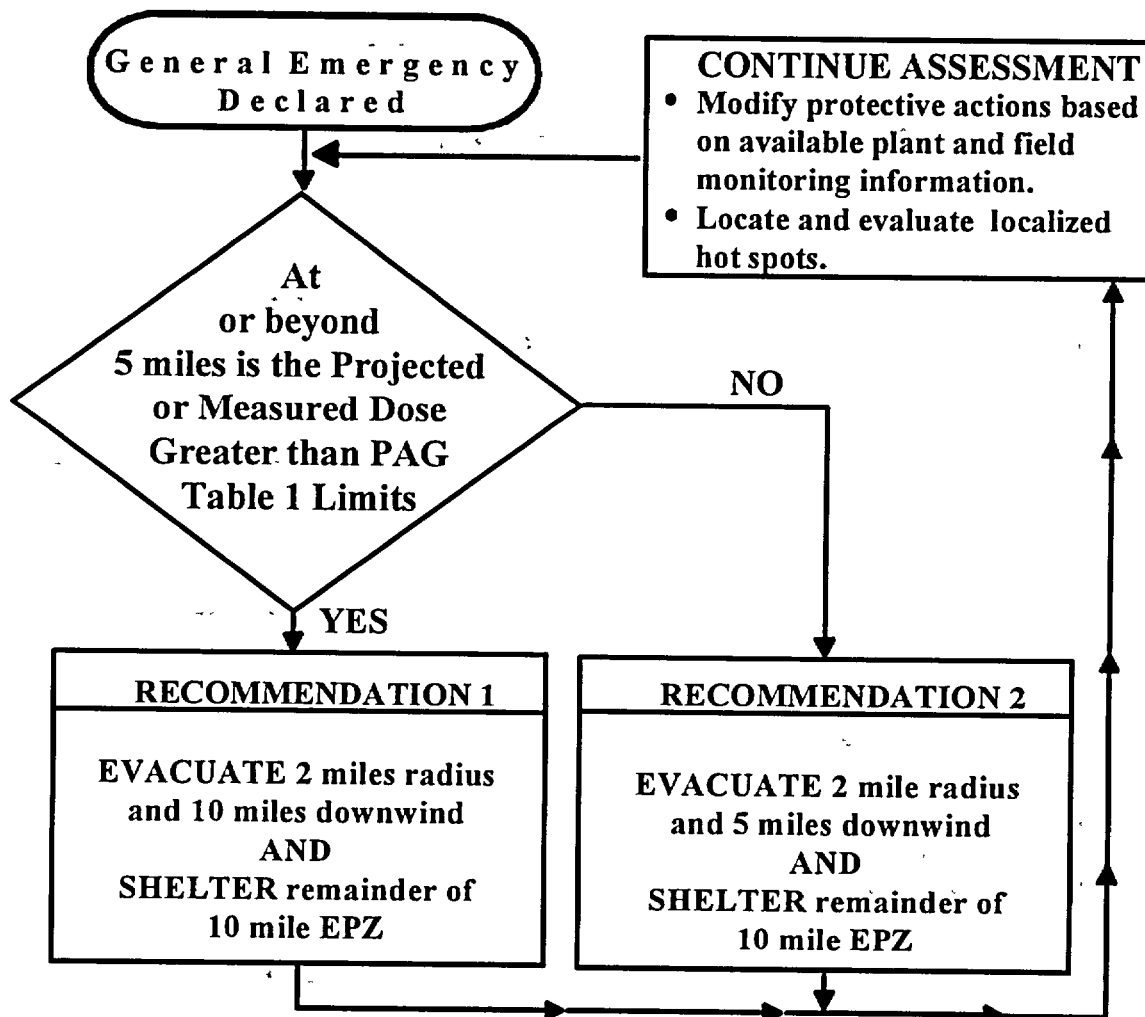


TABLE 1 Protective Action Guides	
TYPE	LIMIT
Measured	3.9E-6 microCi/cc of Iodine 131 or 1 REM/hr External Dose
Projected	1 REM TEDE or 5 REM Thyroid CDE

WBN	GENERAL EMERGENCY	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 11 of 12</b>
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APPENDIX C (Page 1 of 1)

**WBN FOLLOWUP INFORMATION FORM**  
**GENERAL EMERGENCY**

1. ☐ "THIS IS A REAL EVENT" or ☐ "THIS IS A DRILL."
2. "This is \_\_\_\_\_ at the Watts Bar Nuclear Plant.  
This is followup information regarding the General Emergency at Watts Bar:  
Unit 1 ☐ Unit 2 ☐.
3. "Reactor:                      Shutdown ☐ At power ☐ "
4. "The Plant conditions are: Stable ☐ Deteriorating ☐ "
5. "Followup information: (e.g., key events, status changes) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ "
6. "Evacuation of nonessential site personnel is ongoing: Yes ☐ No ☐ "
7. "The radiological conditions are:  
☐ No Abnormal Release Offsite ☐ Liquid Release Offsite  
☐ Airborne Release Offsite ☐ Release Information Not Known."
8. "Additional Rad information: (e.g., release duration) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ "
9. "The meteorological conditions are: Wind speed: \_\_\_\_\_  
Wind direction from: \_\_\_\_\_ "
10. "The following protective action recommendation is provided:"  
☐ Recommendation 1  
☐ Recommendation 2
11. "The event terminated at: \_\_\_\_\_ / \_\_\_\_\_."  
Time Date
12. ☐ "Please repeat the information you have received to ensure accuracy."
13. \_\_\_\_\_ / \_\_\_\_\_  
Signature Date



<b>WBN</b>	<b>GENERAL EMERGENCY</b>	<b>EPIP-5</b> <b>Revision 24</b> <b>Page 12 of 12</b>
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# **SOURCE NOTES**

Page 1 of 2

- <sup>1</sup> NRC IE Information Notice No. 89-89      Event Notification Worksheets
- <sup>2</sup> NRC IE Information Notice No. 86-97      Emergency Communications System
- <sup>3</sup> NRC IE Information Notice No. 86-28      Telephone Numbers to the NRC Operations Center and Regional Offices
- <sup>4</sup> NRC IE Information Notice No. 83-28      Criteria For Protective Action Recommendations For General Emergencies
- <sup>5</sup> MC-850321809004, MSC-00956, NCO-920030366      Monitor readings included in Logic Diagram for Protective Action Recommendations App. B, Note 3
- <sup>6</sup> NIR-0588, DV-851601F 00001.      Include sheltering and immediate Protective Action. Appendix B (Page 1 of 1) Recommendation 2 and Note 1 Initiating Conditions.
- <sup>7</sup> MC-840827005037, MSC-02402.      Revision to Instructional Notes. Appendix B (Page 1 of 1) Notes 1 through 5.
- <sup>8</sup> MC-840827005005, MSC-02376, NCO-920030986      Range of Protective Action Recommendations by the Site Emergency Director. Appendix A (Page 1 of 1) Number 9. Appendix B (Page 1 of 1) Protective Action Recommendation Guidance. Recommendations 1 through 9.
- <sup>9</sup> MC-840719003003, MSC-00700, NCO-920030221      CNTMT Rad Monitor Levels used in Protective Action Recommendations. Appendix B (Page 1 of 1) Note 3.
- <sup>10</sup> MC-840827005035A, MSC-2400      SED duties that can not be delegated. Section 2.0 responsibility. Also see EIPs 6 and 15.
- <sup>11</sup> ANSI N18.7-1976      EIPs will contain the following elements. Subsection 5.3.9.3: 01POI
- <sup>12</sup> 390/93-64A      10 CFR 20 revision made to the PAR chart.
- <sup>13</sup> NRC Administrative Letter 94-04      Change of NRC Operations Center commercial telephone and fax numbers.

# FILING INSTRUCTIONS

DOCUMENT NUMBER EPIP-8

REMOVE REV 16      INSERT REV 17

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TENNESSEE VALLEY AUTHORITY

WATTS BAR NUCLEAR PLANT

## EMERGENCY PLAN IMPLEMENTING PROCEDURE

### EPIP-8

## PERSONNEL ACCOUNTABILITY AND EVACUATION

### REVISION 17

PREPARED BY: Frank L. Pavlechko

PHONE: # 3232

RESPONSIBLE ORGANIZATION: EMERGENCY PREPAREDNESS

APPROVED BY: Frank L. Pavlechko

EFFECTIVE DATE: 7/30/02

LEVEL OF USE: REFERENCE

VALIDATION DATE: 7/30/02

NON-QUALITY-RELATED

WBN	PERSONNEL ACCOUNTABILITY AND EVACUATION	EPIP-8
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### HISTORY OF REVISION/REVIEW

Revision Number	Implementation Date	Pages Affected	Description of Revision
8	2-29-96	3, 11, 17, 18, 20, 27, 28, 29	Non-intent changes made to offsite assembly areas due to removal or nonutilization of the structures. Construction references revised to MODS. Phone number revisions made.
9	8/16/96	3, 4, 6, 10-13, 15-18, 20, 22, 23, 25, 27, 29	Non-intent changes made to identify new shift titles, offsite assembly areas, new building titles, and other format changes, to enhance usability.
CN-1	2/15/97	8, 12	Non-intent revision. Added step concerning decontamination support from SQN to the SMs check list so that it corresponded to the Radcon check list. Added owner controlled area ID to the map in Appendix A.
CN-2	3/27/97	3, 10, 12, 13	TEMA additional back-up number added, counties changed phone numbers.
CN-3	2/2/98	3, 17, 18, 20, 25, 27, 28, 29	Removed references to MODs Inprocessing Center
10	6/30/98	All	Non-intent Changes. Incorporated Change Notices 1, 2, and 3. Phone # revision. Typographical Error corrected.
11	12/08/99	All	Non-intent change. Warehouse phone number revised on page 17.
12	02/07/00	All	Non-intent change. Revised phone number.
13	06/14/00	All	Non Intent change. Revised phone numbers to the MET station and McMinn Co. Revised description location of security portal to include (West) portal. Added TVA Police number to near site organizations. This revision resolves problems identified in WBN PER, 006394.
14	12/11/00	All	Non Intent changes. Corrected the fax number for the Main Warehouse to use the fax closest to the assembly area. Revised requirements for visitor(s) and MODS personnel to remain in the Protected area during assembly and accountability operations per directions of the EP PEER Team and TVAN requirements for standardization. Removed reference to the all clear alarm which is being eliminated for standardization purposes.
15	09/25/01	All pg. 6	Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP: Intent change. Procedure revised to Non-Quality related per requirements of NQAP & pending revision to SPP-2.2. The coversheet and records section of the procedure was revised to reflect this change.

### HISTORY OF REVISION/REVIEW

Revision Number	Implementation Date	Pages Affected	Description of Revision
16	01/24/02	All pg. 3, 9, 10, 15, 20	<p>Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP:</p> <p>Intent revision. Per guidance provided in the NRC Safeguards advisory revised App. B, C &amp; D to direct SM and Security to hold limited area evacuations or assembly and accountability activities during a Security Event (adversary attack) or take cover in specific area until the concern is resolved.</p> <p>Non-intent change. Revised phone number on APP F.</p>
17	07/30/02	All	<p>Plan effectiveness determinations revisions indicate the following revisions do not reduce the level of effectiveness of the procedure or REP:</p> <p>Intent revision. Per guidance provided by the TVAN EP PEER Team this procedure was re-written in the new standardized methods of operation and format. Enhancements made to instructions for notifications to outside protected area assembly areas and near site facilities per IN 2002-14. This reference was added to the procedure.</p>

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## 1.0 INTRODUCTION

### 1.1 Purpose

This Procedure provides instructions for accounting for all onsite personnel and visitors prior to an orderly evacuation of a specific area(s) or the site during a radiological or toxic hazard emergency. This Procedure describes the method for notifying all site personnel and gives guidance for re-entry initiation. This Procedure also describes the method for notifying and conducting an orderly evacuation of the near site facilities within the Owner Controlled Area (OCA).

The scope of this procedure includes emergency and non-emergency response personnel, visitors, contractor/construction personnel and other persons who may be within the OCA during an emergency situation.

This procedure will be initiated by way of an emergency classification procedure step (i.e. EPIP-2, 3, 4, and 5). If situations where to exist, where in the judgment of the Shift Manager(SM) / Site Emergency Director (SED) it becomes 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 - 6, Activation And Operation Of The Technical Support Center (TSC)
- G. EPIP - 7, Activation And Operation Of The Operations Support Center (OSC)
- H. EPIP - 11, Security and Access Control
- I. EPIP - 13, Termination Of The Emergency And Recovery

### 3.0 INSTRUCTIONS

#### 3.1 General Personnel Information

- A. Normal Entering and Exiting of the Plant Protected Area (PA).
1. Individuals entering the plant PA shall:
    - Swipe their badge into the entry card reader,
    - Enter the PA in accordance with security procedures.
  2. Individuals exiting the PA shall:
    - Swipe their badge into the exit card reader in the appropriate exit portals.
    - Exit the PA in accordance with security procedures.
  3. Exit card readers function as accountability card readers for personnel exiting the PA.
  4. Protected Area assembly/Accountability card reader locations are identified in Appendix A.

#### 3.2 Activating the Assembly and Accountability Process

- A. Shift Manager/Site Emergency Director
1. The Shift Manager (SM) or Site Emergency Director (SED) shall initiate the activation of the assembly and accountability process.
    - a. The SM/SED 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 D for activation.

#### 3.3 Site Assembly and Accountability

A three-minute undulating siren (a siren that raises and lowers in volume and pitch, 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, 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 (SED) or a plant evacuation is ordered, following the instructions on the plant address system or through Nuclear Security.



**3.3 Site Assembly and Accountability (Continued)****B. Non-Emergency Responders With No Assigned Assembly Area (outside the PA)**

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 OCA.
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 OCA.

**C. Emergency Responders**

1. Upon recognition of the Assembly and Accountability process, emergency responders, shall proceed immediately to their designated assembly area(s) as listed on **Appendix A**.
2. Arriving at the designated assembly area, personnel shall:
  - a. Swipe their badge into the accountability card reader.
  - b. Sign the facility Accountability Roster.
  - 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** for a list of Protected Area (PA) assembly area locations.
2. If the accountability card reader will not accept a badge or an assembly area cannot be accessed, Nuclear Security should be contacted immediately at ext. 8464 or ext. 8495.

**3.3 Site Assembly and Accountability (Continued)****G. Shift Manager (SM)/Site Emergency Director (SED)**

When conditions have been met that require the activation of the assembly and accountability process, the SM/SED will implement **Appendix D** of this procedure.

**H. Nuclear Security (NS)**

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 E** of this procedure.

**I. Radiological Control (RADCON)**

When notified that entry 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 F** of this procedure.

**3.4 Particular Limited Area Evacuation**

Plant conditions require Operations to evacuate or request through the TSC the evacuation of a particular plant area(s).

- A. The SM/SED or designee shall make a public address (PA) announcement and follow the instructions in Appendix G.
- 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.

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

A site evacuation will be conducted upon an order issued by the SM/SED. 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 they have exited the protected area.
  - 2. The TSC or NS will by public address announcement(s) or dispatching Security personnel, brief and release persons in assembly areas.
  - 3. Once released, personnel shall go immediately to the protected area exit portal. Personnel shall swipe their badge into the exit card reader or as instructed by NS. 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, NS should be contacted immediately.
    - b. If for any reason the exit card reader will not properly acknowledge a badge, NS should be contacted immediately.

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### 3.5 Evacuation of Non-Emergency Response Personnel (continued)

4. Personnel shall proceed to their vehicle and evacuate from the site to their place of residence or if needed to one of the remote assembly area(a), following all briefing information provided to them by the TSC or NS. Exit routes leading away from the plant will be identified.
5. All personnel evacuating should anticipate that the Owner Controlled Area (OCA) Security Check Point will be established and if conditions require, RADCON will be monitoring vehicles and personnel as they exit.
6. Upon exiting the OCA, personnel shall follow all guidance of state and local authorities.

#### B. Non-Emergency Responders Within the OCA

1. All personnel assembled in designated assembly areas outside the PA and within the OCA shall remain in those areas until released for the purpose of evacuation.
2. NS will notify by phone or dispatch security personnel directly to OCA 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 or if needed to one of the remote assembly area(s), following all briefing information provided to them by NS. Exit routes leading away from the plant will be identified.

If for any reason personnel can not proceed directly to their vehicle and evacuate the site NS shall be contacted immediately.

4. All personnel exiting the site Protected Area should anticipate that OCA Security Check Point will be established and if conditions require, RADCON will be monitoring vehicles and personnel as they exit.
5. Upon exiting the OCA, 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 G of this procedure.

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### 3.5 Evacuation of Non-Emergency Response Personnel (continued)

#### E. Nuclear Security (NS)

When notified that an order to evacuate site non-emergency response personnel has been issued by the SM/SED, Nuclear Security will implement Appendix B, C, & H of this procedure.

#### F. Radiological Control (RADCON)

When notified that an order to evacuate site non-emergency response personnel has been issued by the SM/SED, Radiological Control will implement Appendix I of this procedure.

## 4.0 DOCUMENTATION

### Non-QA Records

Checklist(s), Logs, and Security Computer Roll Call List of accountability operations, will be sent to the WBN Emergency Planning Manager and stored appropriately.

## 5.0 ILLUSTRATIONS /APPENDICES

- Appendix A - Protected Area Assembly Areas
- Appendix B - Assembly Areas (Outside the Protected Area) Notifications
- Appendix C - Near site Organization(s) Notifications.
- Appendix D - Shift Manager/Site Emergency Director - Assembly and Accountability Actions
- Appendix E - Nuclear Security - Assembly and Accountability Actions
- Appendix F - Radiological Control - Assembly and Accountability Actions
- Appendix G - Shift Manager/Site Emergency Director - Limited Area & Site Evacuation Actions
- Appendix H - Nuclear Security - Evacuation Actions
- Appendix I - Radiological Control - Evacuation Actions
- Appendix J - Accountability Roster

APPENDIX A  
Page 1 of 1

## PROTECTED AREA ASSEMBLY AREAS

LOCATION	REPORTING ORGANIZATION(S)
El. 713' Mechanical Maintenance Shop	Mechanical Maintenance personnel
El. 713' Chem Lab	Chemistry Laboratory personnel
El. 713' RADCON Lab	RADCON personnel, AUOs, OSC responders, Fire Operators/others
El. 729' Electrical Maintenance Shop	Electrical Maintenance personnel
El. 729' Instrument Maintenance Shop	Instrument Maintenance personnel
El. 729' MOB Maintenance Engineering Support Office	Maintenance Planning/Engineering/others
El. 741' Ops. Procedures Office	Procedure Writers/NRC Office/others
El. 755' Technical Support Center (TSC)	TSC emergency responders
El. 755' Main Control Room	Control Room and Operations personnel
Plant Assembly Room	Main Office Building occupants/others
EQB, Vending Area	EQB and MDB Occupants, MODS personnel/others

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APPENDIX B  
(Page 1 of 3)

## ASSEMBLY AREA(S) (OUTSIDE THE PROTECTED AREA) NOTIFICATIONS

Nuclear Security (NS) will provide the information from this appendix to all assembly areas outside the protected area (listed below) as it becomes available or as directed by the SM/SED or TSC Security Manager.

- Initial contact should be by phone with Fax message used for follow-up.
- Should phone contact not be made, (i.e. off-hours / weekends / phone trouble) direct the outside OCA Security Motor Patrol to check the area(s) for personnel and provide information as needed.
- After evacuation orders have been initiated, the OCA Security Motor Patrol will ensure all non essential personnel have left the area(s).

Location	Area	Phone #	Fax #
WBN Training Center	Mgr. Office (cafeteria)	x3758, x1216, or x8962	x3797
Administration Building	Vending Area, Office Area(s) Conference Room(s)	x8767 or x8768	x1924
Main Warehouse	Conference Room Area	x1436	x3233

APPENDIX B (continued)  
(Page 2 of 3)

Time: \_\_\_\_\_  
Date: \_\_\_\_\_

**ASSEMBLY AREAS  
(OUTSIDE THE PROTECTED AREA)  
NOTIFICATIONS**

A.	"This is a REAL EMERGENCY." <input type="checkbox"/> <b>OR</b> "This is a DRILL." <input type="checkbox"/> "This is a REAL EMERGENCY." "This is a DRILL."
B.	WBN has declared a _____ emergency. (enter emergency classification.)
C.	Radiological conditions are: No release <input type="checkbox"/> Release Ongoing <input type="checkbox"/>
D.	Please convey the following instructions to all people in your assembly area(s). <ul style="list-style-type: none"> <li>Stay indoors <input type="checkbox"/></li> <li>Close off HVAC Systems <input type="checkbox"/></li> <li>Check out doors or in adjacent buildings and direct all personnel to the Assembly Area to await instructions. <input type="checkbox"/></li> <li>Follow general instructions for the assembly area. <input type="checkbox"/></li> </ul>
E.	Additional instructions are as follows: Return to work <input type="checkbox"/> Remain in assembly area <input type="checkbox"/> Additional instructions/information: _____ _____
F.	Site Evacuation has been ordered by the SED. <input type="checkbox"/> YES <input type="checkbox"/> NO
G.	Remain calm and exit the site by your normal route unless otherwise directed. <input type="checkbox"/> YES <input type="checkbox"/> NO
H.	You will be informed when it is safe to return to work. <input type="checkbox"/>

- WBN Training Center
- Main Warehouse
- Administration Building



APPENDIX B (continued)  
(Page 3 of 3)ASSEMBLY AREAS  
(OUTSIDE THE PROTECTED AREA)  
NOTIFICATIONS**"FOR RADIOLOGICAL EMERGENCY"**  
**ASSEMBLY AREA - GENERAL INSTRUCTIONS**  
**(OUTSIDE THE PROTECTED AREA)**

- 1) START ASSEMBLING PERSONNEL ☐
- 2) CLOSE ALL DOORS AND WINDOWS ☐
- 3) SHUT DOWN VENTILATION SYSTEM ☐
- 4) NO EATING, DRINKING OR SMOKING ☐
- 5) CALL IN PEOPLE FROM OUTSIDE LOCATIONS OR  
SURROUNDING BUILDINGS TO THE ASSEMBLY AREA ☐
- 6) KEEP PAGE SYSTEM AND PHONES CLEAR FOR USE  
DURING THE EMERGENCY ☐
- 7) LISTEN FOR INSTRUCTIONS ☐
- 8) IF EVACUATION OF SITE IS DIRECTED, LEAVE IN A SAFE AND  
ORDERLY MANNER BY THE MAIN ACCESS ROUTE/\_\_\_\_\_  
(ALTERNATE ROUTE)

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APPENDIX C  
(Page 1 of 3)

## NEAR SITE ORGANIZATION(S) NOTIFICATIONS

Nuclear Security (NS) will provide the following information to the near site organizations listed below when directed by the SM/SED or TSC Security Manager.  
RADCON will provide technicians to monitor personnel (if necessary).

- These contacts should be made by phone with Fax Message for follow-up.
- Should phone contact not be made, (i.e. off-hours/weekends/phone trouble) direct the OCA Security Motor Patrol to check the area for personnel and provide information as needed.
- After evacuation orders have been initiated, the OCA Security Motor Patrol will ensure all non essential personnel have left the area(s).

LOCATION	PHONE #	FAX #
WBN Weapons Range	9-365-1400	NA
WBN Grounds Maintenance	9-365-3334	NA
WBN Facilities Trailer(s)	9-365-1890 or 1895	9-365-1710
Watts Bar Dam (Hydro)	9-365-7600 or 6300	9-365-7640
TVA Police/TVA TPS Building	9-365-3776 or 3778 or 1965 or 8450	9-365-3873
Watts Bar Maintenance Facility	9-365-8720 or 8722 or 7849	9-365-8709
WBN Environmental Data Station (not normally manned)	9-365-8484	NA
Reservoir Property (Maintenance Base)	9-365-5256	9-365-7628
Lock Master (Watts Bar)	9-365-7634 or 9-1-423-334-3522	9-1-423-334-4521
Watts Bar Dam Spill Way fishing Area	<b>* NO PHONE IN THIS AREA OCA SECURITY MOTOR PATROL OR TVA POLICE SHALL NOTIFY PEOPLE TO LEAVE THE AREA.</b>	NA

Time \_\_\_\_\_  
Date \_\_\_\_\_

APPENDIX C (continued)  
(Page 2 of 3)

### NEAR SITE ORGANIZATION(S) NOTIFICATIONS

A.	"This is a REAL EMERGENCY." "This is a REAL EMERGENCY."	<input type="checkbox"/> OR <input type="checkbox"/>	"This is a DRILL." "This is a DRILL."	<input type="checkbox"/>
B.	WBN has declared a _____ emergency. (enter emergency classification.)			
C.	Radiological conditions are: No release <input type="checkbox"/> Release Ongoing <input type="checkbox"/>			
D.	Please convey the following information to all people at your location.			
	• Stay indoors			<input type="checkbox"/>
	• Close off HVAC Systems			<input type="checkbox"/>
	• Check outdoors or in adjacent buildings and direct all personnel to an assembly area to await instructions.			<input type="checkbox"/>
E.	Additional instructions/information: _____ _____			
	WBN Site evacuation has been ordered by the Site Emergency Director. <input type="checkbox"/> YES <input type="checkbox"/> NO			
F.	Remain calm and initiate an evacuation of your organization unless otherwise directed. <input type="checkbox"/> YES <input type="checkbox"/> NO			
G.	You will be informed when it is safe to return to work. <input type="checkbox"/>			

• Watts Bar Dam (Hydro)

• WBN Weapons Range

• Watts Bar Maintenance Facility

• Lock Master (Watts Bar)

• WBN Facilities Trailer(s)

• Reservoir Property (Maintenance Base)

• WBN Grounds Maintenance

• WBN Environmental Data Station

• TVA POLICE/TVA TPS Building

APPENDIX C (continued)  
(Page 3 of 3)

**NEAR SITE ORGANIZATION(S)  
NOTIFICATIONS**

**"FOR RADIOLOGICAL EMERGENCY"  
GENERAL INSTRUCTIONS  
(NEARSITE ORGANIZATIONS)**

- |    |  |                          |
|----|--|--------------------------|
| 1) | START ASSEMBLING PERSONNEL   | <input type="checkbox"/> |
| 2) | CLOSE ALL DOORS AND WINDOWS  | <input type="checkbox"/> |
| 3) | SHUT DOWN VENTILATION SYSTEM   | <input type="checkbox"/> |
| 4) | NO <u>EATING</u> , <u>DRINKING</u> OR <u>SMOKING</u>   | <input type="checkbox"/> |
| 5) | CALL IN PEOPLE FROM OUTSIDE LOCATIONS OR<br>SURROUNDING BUILDINGS TO A ASSEMBLY AREA                                   | <input type="checkbox"/> |
| 6) | KEEP PAGE SYSTEM AND PHONES CLEAR FOR USE<br>DURING THE EMERGENCY  | <input type="checkbox"/> |
| 7) | LISTEN FOR INSTRUCTIONS  | <input type="checkbox"/> |
| 8) | IF EVACUATION OF SITE IS DIRECTED, LEAVE IN A <u>SAFE</u> AND<br><u>ORDERLY</u> MANNER BY THE MAIN ACCESS ROUTE/_____. |                          |
- (alternate route)

APPENDIX D  
Page 1 of 3**SHIFT MANAGER/SITE EMERGENCY DIRECTOR - ASSEMBLY AND ACCOUNTABILITY  
ACTIONS**

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

**Note.**

IF onsite activities (i.e. Security Event "Adversary Attack") would put people at risk or in Harms way, **Do Not** conduct this action until the concern is resolved.

**NOTIFY** site personnel to "Take Cover/Specific Action and await further instructions".

IF this situation does not apply proceed with Assembly and Accountability.

1. The SM/SED has determined that conditions require the activation of the assembly and accountability siren system and process.

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

2. **NOTIFY...** Nuclear Security (NS) at ext. 8464 or 8495 that:

☐

- A. The assembly and accountability sirens will be activated immediately.

**AND**

- B. NS should implement EPIP-8, Appendix E.

3. **NOTIFY...** Radiological Control (RADCON) at ext. 7865 that:

☐

- A. The assembly and accountability sirens will be activated immediately.

**AND**

- B. RADCON should implement EPIP-8, Appendix F.

4. **MAKE...** a public address 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)**

5. **ACTIVATE...** the assembly and accountability sirens.

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

WBN	PERSONNEL ACCOUNTABILITY AND EVACUATION	EP-8
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APPENDIX D  
Page 2 of 3

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

6. WHEN... the Assembly and Accountability Sirens have completed the 3-minute cycle and silenced. ☐

MAKE... 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 and be accounted for."**

(REPEAT)

**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 ext. 751-1614. ☐

OR

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

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

AND

- B. WBN EP-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 and await further instructions."**

(REPEAT)

APPENDIX D  
Page 3 of 3

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

- |     |   | Initials                 | Time |
|-----|---|--------------------------|------|
| 9.  | <b>VERIFY</b> if conditions at this time require an order to evacuate all non-emergency response personnel from the Owner Controlled Area(OCA).   |                          |      |
| 10. | IF... Conditions at this time, <b>DO</b> require an order to evacuate all non-emergency response personnel from the OCA.  | <input type="checkbox"/> |      |
|     | THEN... Initiate <b>Appendix G</b> of this procedure .  |                          |      |
| 11. | IF... Conditions at this time, <b>DO NOT</b> require an order to evacuate all non-emergency response personnel from the OCA.  | <input type="checkbox"/> |      |
|     | THEN Exit this procedure. Re-enter this procedure at <b>Appendix G</b> when it has been determined by the SM/SED that conditions require an order to evacuate all non-emergency response personnel. |                          |      |

APPENDIX E  
Page 1 of 4

**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 Site Assembly and Accountability actions.

**NOTE:**

IF a Security Event (i.e. adversary attack) would put people at risk or in Harms way **NOTIFY** the **SM/SED** prior to commencing assembly and accountability.  
IF this does not apply, proceed with accountability operations.

- |    |   |                                    |
|----|---|------------------------------------|
| 1. | Notified that activation of the assembly and accountability process and actions has been initiated by the SM/SED or designee.   | <u>          </u><br>Initials Time |
| 2. | <b>CONTROL</b> and <b>RESTRICT</b> access to the Protected Area, except for those individuals designated for emergency response, per the Emergency Response Organization Call List or as authorized for emergency response by the SM/SED or TSC Security Manager or OSC Security Advisor. | <input type="checkbox"/>           |
| 3. | <b>MAINTAIN</b> Owner Controlled Area (OCA) traffic controls at the OCA traffic control point.  | <input type="checkbox"/>           |
| 4. | <b>NOTIFY...</b> the TSC or RADCON at ext.7865 that, OCA traffic control actions are being maintained.  | <input type="checkbox"/>           |

**AND**

**REQUEST...** TSC or RADCON dispatch personnel to the OCA  
Emergency Survey Point #15 (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 Response Organization Call List or as authorized for emergency response by the SM/SED or TSC Security Manager or OSC Security Advisor. | <input type="checkbox"/> |
| 6. | <b>COMPLETE (Appendices B and C)</b> and upon direction from the TSC Security Manager or SM/SED, initiate the calls and Fax the information to the designated locations.   | <input type="checkbox"/> |



APPENDIX E  
Page 2 of 4

## NUCLEAR SECURITY ASSEMBLY AND ACCOUNTABILITY ACTIONS

7. **DISPATCH** officer(s) to search areas (as needed) within the OCA outside the Protected Area (see **Appendix B & C**).. ☐

- A. **IF**... Visitors, contractors/construction personnel, and other persons in public access areas on or passing within the OCA and not assigned a designated assembly area(s);

**THEN**... NS will:

- **Warn** and advise individuals of current actions at the station.
- **Advise** individuals on exits routes and request that they immediately exit the OCA.

- B. **IF**... Visitors, contractors/construction personnel, and other persons in public access areas on or passing within the OCA are assigned a designated assembly area(s); ☐

**THEN**... NS will:

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

- 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 a designated assembly area location outside the Protected Area. (See **Appendix B and C**).

8. **REPORT** the results of accountability to the SM/SED within 30 minutes after the assembly and accountability sirens have sounded.

Initials Time

APPENDIX E  
Page 3 of 4

**NUCLEAR SECURITY - ASSEMBLY AND ACCOUNTABILITY ACTIONS**

9. **UNACCOUNTED FOR INDIVIDUALS** ☐

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

THEN...NOTIFY the TSC Security Manager or SM/SED that search teams will be needed to locate the missing individual(s),

AND

RADCON will assist search teams (as needed).

10. **TWO PERSON (LINE OF SIGHT) RULE PUBLIC ADDRESS ANNOUNCEMENT** ☐

A. **WHEN...**Assembly and Accountability has been completed,

AND

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

THEN...REQUEST permission from the TSC Security Manager or SM/SED to make the following Public Address Announcement:

Initials Time

**"ATTENTION ALL SITE PERSONNEL, THIS IS A SECURITY ALERT ACTION. EFFECTIVE IMMEDIATELY, THE TWO MAN RULE HAS BEEN ORDERED."**

**"ENTRY TO VITAL AREAS NOW REQUIRES CONTINUOUS LINE OF SIGHT BETWEEN TWO (2) PERSONNEL."**

(REPEAT)

APPENDIX E  
Page 4 of 4**NUCLEAR SECURITY - ASSEMBLY AND ACCOUNTABILITY ACTIONS****11. AUTOMATED ACCOUNTABILITY, SYSTEM FAILURE GUIDELINES**

In the event the automated accountability system is unable to accomplish its designed function, NS will recommend the following methods to account for onsite personnel to the SM or TSC SED for action.

- A. **NOTIFY** personnel in the Assembly Area(s) (within the Protected Area) to remain where they are until the Accountability System can be reactivated.
- B. **IF** plant conditions require immediate action (i.e., danger to health or safety), the SED will order all nonessential onsite personnel to exit the protected area and report to the Watts Bar Training Center. Once all nonessential personnel have left the protected area, a verbal review of the remaining onsite emergency responders will be conducted.
- C. Walk-downs within the protected area will be conducted to ensure all non-essential personnel have left the plant. These actions and search and rescue efforts (if needed) will be coordinated by the TSC Security Manager or SM/SED.

APPENDIX F  
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... in plant Radiological conditions require additional monitoring, ☐  
 THEN... **ESTABLISH** 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 ☐
  - Radiation levels that would result in a radiation dose of 100 mrem in one hour, or
  - airborne radioactivity above 10CFR 20.1201 DAC limits.
 THEN... **NOTIFY** 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 TCP is being maintained. Initials Time  
 THEN... **EVALUATE** radiological conditions to determine if a RADCON survey checkpoint at the OCA (Emergency Survey Point # 15) should be established.
5. IF... Radiological conditions require that a RADCON survey checkpoint be established, ☐  
 THEN... **DISPATCH** RADCON personnel to the OCA (Emergency Survey Point # 15).  

**AND**

**ESTABLISH** a RADCON survey checkpoint.
6. RADCON personnel will be dispatched by the OSC or SM/SED to assist Protected Area search teams (as needed). ☐

APPENDIX G  
Page 1 of 4**SHIFT MANAGER/SITE EMERGENCY DIRECTOR Limited AREA  
EVACUATION/TAKE COVER ACTIONS**

- A. **MAKE** a Public Address (PA) announcement similar to the following ☐

"This is a real emergency." ☐ **OR** "This is a drill." ☐

"**ATTENTION** All Site Personnel, conditions in the \_\_\_\_\_  
(area[s] to be evacuated)  
warrant an evacuation of the area. Leave the \_\_\_\_\_  
(area[s] to be evacuated)  
immediately and remain clear until further notice."

**OR**

"**ATTENTION** All Site Personnel, conditions in \_\_\_\_\_  
(area[s] of concern)  
warrant you to take cover in this area. Take Cover in the \_\_\_\_\_  
(area[s] of concern)  
immediately and remain there until further notice."

- B. **IF** necessary, **FORM** a team composed of Operations and Radiological Control (RADCON) personnel to ensure evacuation of high noise areas. ☐
- C. **DIRECT** Operations/RADCON /Others to **SEARCH** the evacuated area to ensure all personnel have left the area. ☐
- D. **REPORT** results to the TSC (if activated). ☐
- E. **INFORM** NS of the situation and direct assistance as needed. ☐
- F. **PERFORM** other duties as needed. ☐

APPENDIX G  
Page 2 of 4

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

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

**Note 1:** The implementation of a site evacuation should be based on the protective actions which will result in the lowest personal exposure. In a radiological or hazardous material emergency, evacuation should be initiated either before or after the passage of the release. Evacuation routes should be chosen to lead personnel away from the path of the plume or danger.

**Note 2:** Based on ongoing emergency activities in the local communities (if activated) discussions with the CECC, Meigs, Rhea, and McMinn Counties, EOC officials may be warranted to identify traffic conditions, road weather conditions, or any other hazards that would effect evacuation.

- |    |   | 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> the Central Emergency Control Center (CECC) Director of the impending evacuation. (5-751-1614) (IF not staffed, <b>NOTIFY</b> the Operations Duty Specialist, 5-751-1700)   | <input type="checkbox"/> |      |
| 4. | <b>CONSIDER</b> first the precautionary evacuation of all non-essential personnel (outside the Protected Area) from the site. These personnel will be assembled in their designated assembly areas. ( <b>Appendix B and C</b> ) Once completed, non-essential personnel within the Protected Area can be evacuated ( <b>Appendix A</b> ). | <input type="checkbox"/> |      |
| 5. | <b>PROVIDE</b> any special instructions to assembly area(s) through PA announcements, Emergency Dispatches or NS communications. Coordination with RADCON may be necessary prior to these announcements.  | <input type="checkbox"/> |      |
| 6. | <b>NOTIFY...</b> Nuclear Security (NS) at ext. 8464 or 8495 that:<br><br>A. An order to evacuate site non-emergency response personnel has been issued.<br><br><b>AND</b><br><br>B. NS Should implement EPIP-8, <b>Appendix H</b> .   | <input type="checkbox"/> |      |
| 7. | <b>NOTIFY...</b> Radiological Control at ext.7865 that:<br><br>A. An order to evacuate site non-emergency response personnel has been issued,<br><br><b>AND</b><br><br>B. RADCON should implement EPIP-8, <b>Appendix I</b> .   | <input type="checkbox"/> |      |

## APPENDIX G

Page 3 of 4

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

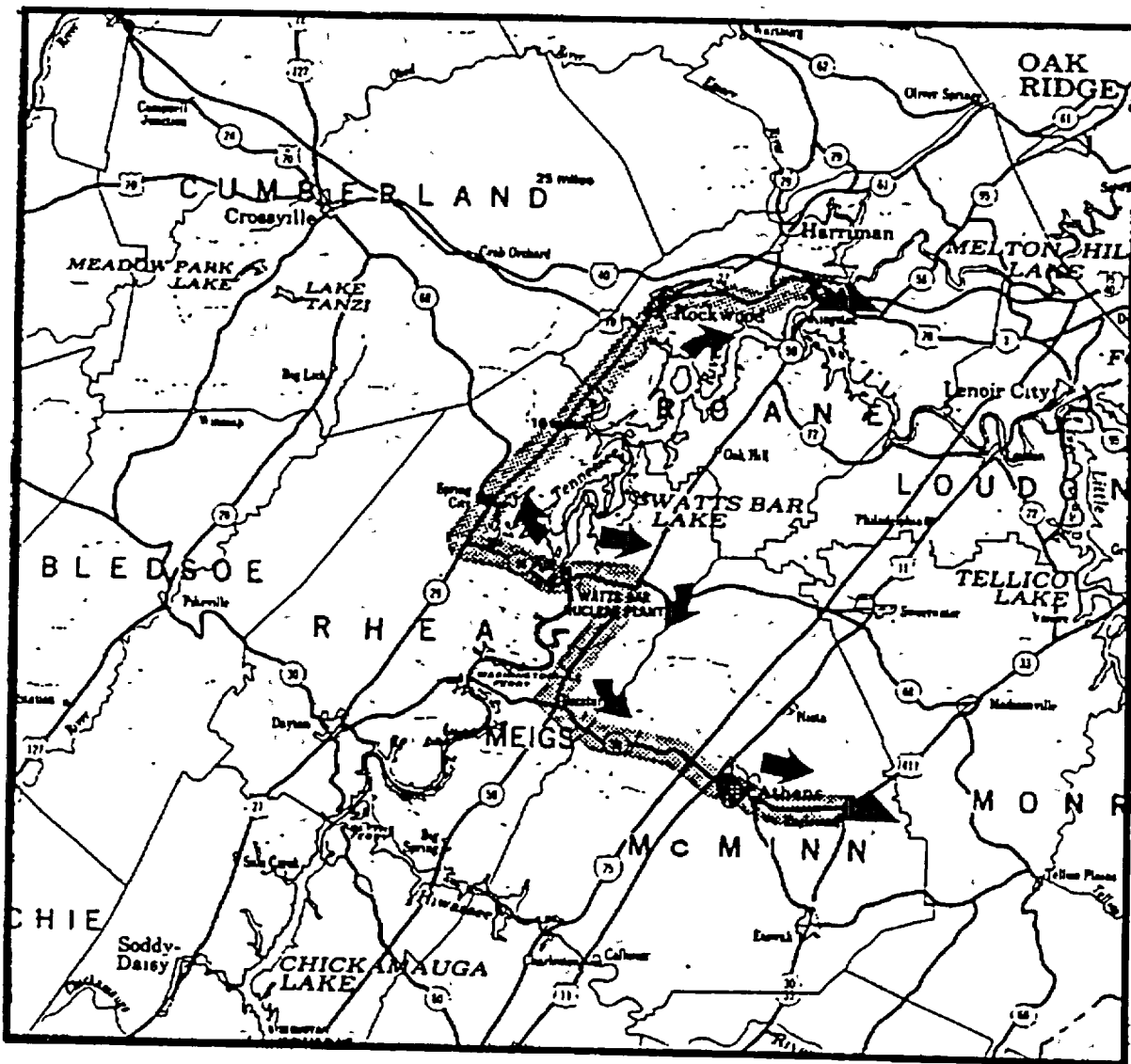
8. IN the event of a total plant **EVACUATION**, determine the need for non-essential personnel, and vehicles to pass through a RADCON check point (if deemed necessary) prior to being released from the site. This point will be set up at **Emergency Survey Point # 15** ☐
9. **EVACUATION** of onsite non-contaminated individuals should take place along normal exit routes away from the site, conditions permitting. ☐
10. **DIRECT** NS to provide appropriate personnel to direct traffic on to Route 68. ☐
- IF plant conditions preclude radiological decontamination, evacuees will be informed of transportation, sheltering, and decontamination arrangements prior to leaving the site. The primary evacuation shelter for onsite contaminated personnel will be Sequoyah Nuclear Plant (SQN), approximately 50 miles south of Watts Bar Nuclear Plant (WBN).
11. IF conditions warrant Support personnel can be sent home or directed/staged to other offsite locations (if necessary). Two possible locations are: ☐
- 1) **Englewood Elementary School** - if directing personnel to this school, notify McMinn Co. EMA (day hours, Monday - Friday) at 9-1-423-744-2760/2724; or McMinn Co. 911 Communications (off hour, 24 hours), at 9-1-423-744-2721. Also notify the Tennessee EMA at 9-1-615-741-0001.
- 2) **Roane County High School** - if directing personnel to this school, notify the Roane Co. 911 Dispatch Center at 9-1-865-354-8045 and request Roane Co. EMA be notified. Also notify the Tennessee EMA at 9-1-615-741-0001. ☐
12. **ANNOUNCE** Site Evacuation with the following message. ☐
- REPEAT** as needed.
- "ATTENTION ALL SITE PERSONNEL. ATTENTION ALL SITE PERSONNEL. The SED has ordered a site evacuation. All personnel except those with emergency assignments shall exit via your normal entrance and exit location to their home(s) / \_\_\_\_\_ until further notice."**
13. IF an evacuation is ordered, **DIRECT** Nuclear Security (NS) to notify the Assembly Areas Outside the Protected Area (**Appendix B**) and the Near site organizations (**Appendix C**) of ongoing site actions. ☐
14. IF site personnel require transportation or sheltering coordinate arrangements for assistance with the TSC/CECC. ☐
15. Conditions permitting, you may recall evacuated people as needed. ☐
16. **KEEP** the CECC informed of site activities ☐

APPENDIX G (continued)  
(Page 4 of 4)

## MAP TO ROANE COUNTY HIGH SCHOOL AND ENGLEWOOD ELEMENTARY SCHOOL

From WBN, take route 68 west to route 27 north. Follow 27 north and go through the city of Rockwood. At the 6th traffic light (last light) the road Y's to the right. The road to the right is route 70. Follow route 70 for 12 miles to Kingston. Cross the Clinch River bridge and go approximately one mile and you will see Roane County High School on the left.

From WBN, follow 68 east to route 58 south. Follow 58 south to Decatur. At the traffic light next to the County Court House make a left on to route 30 east. Follow 30 east (10 miles) and go through Athens. Turn left onto route 39 east to Englewood. Follow 39 to Englewood, cross over railroad tracks and go past the first red light; you will see the Englewood Elementary School one block up on the left.





APPENDIX H  
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.

- |    |   | <u>Initials</u>          | <u>Time</u> |
|----|---|--------------------------|-------------|
| 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 (PA), except for those individuals designated for emergency response, per the Emergency Response Organization Call List or as authorized for emergency response by the TSC Security Manager, OSC Security Advisor or SM/SED.   | <input type="checkbox"/> |             |
| 3. | <b>CONTINUE</b> to maintain OCA on-site traffic controls.   | <input type="checkbox"/> |             |
| 4. | <b>CONTINUE</b> to control and restrict access to the Owner Controlled (OCA) Area, except for those individuals designated for emergency response, per the Emergency Response Organization Call List or as authorized for emergency response by the TSC Security Manager, OSC Security Advisor or SM/SED. | <input type="checkbox"/> |             |
| 5. | <b>NOTIFY...</b> RADCON at ext. 7865 that, OCA on-site traffic control actions are in progress,   | <input type="checkbox"/> |             |

**AND**

**REQUEST** RADCON dispatch personnel to the Owner Controlled Area Traffic Control point (if determined by RADCON) that conditions requiring vehicle survey(s) exist.

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

APPENDIX H  
Page 2 of 3

**NUCLEAR SECURITY - EVACUATION ACTIONS**

7. **DETERMINE** evacuation route based upon information obtained in step (6) of this appendix: ☐
8. **VERIFY** that all prior listed items are complete before continuing in this action list. ☐

**NOTE**

Brief and advise all individuals in Assembly Areas Outside the Protected Area and Near Site Organizations areas (**Appendix B & C**) 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 (OCA).

9. **DISPATCH** Security personnel to assist (as needed) and verify in the site evacuation.

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

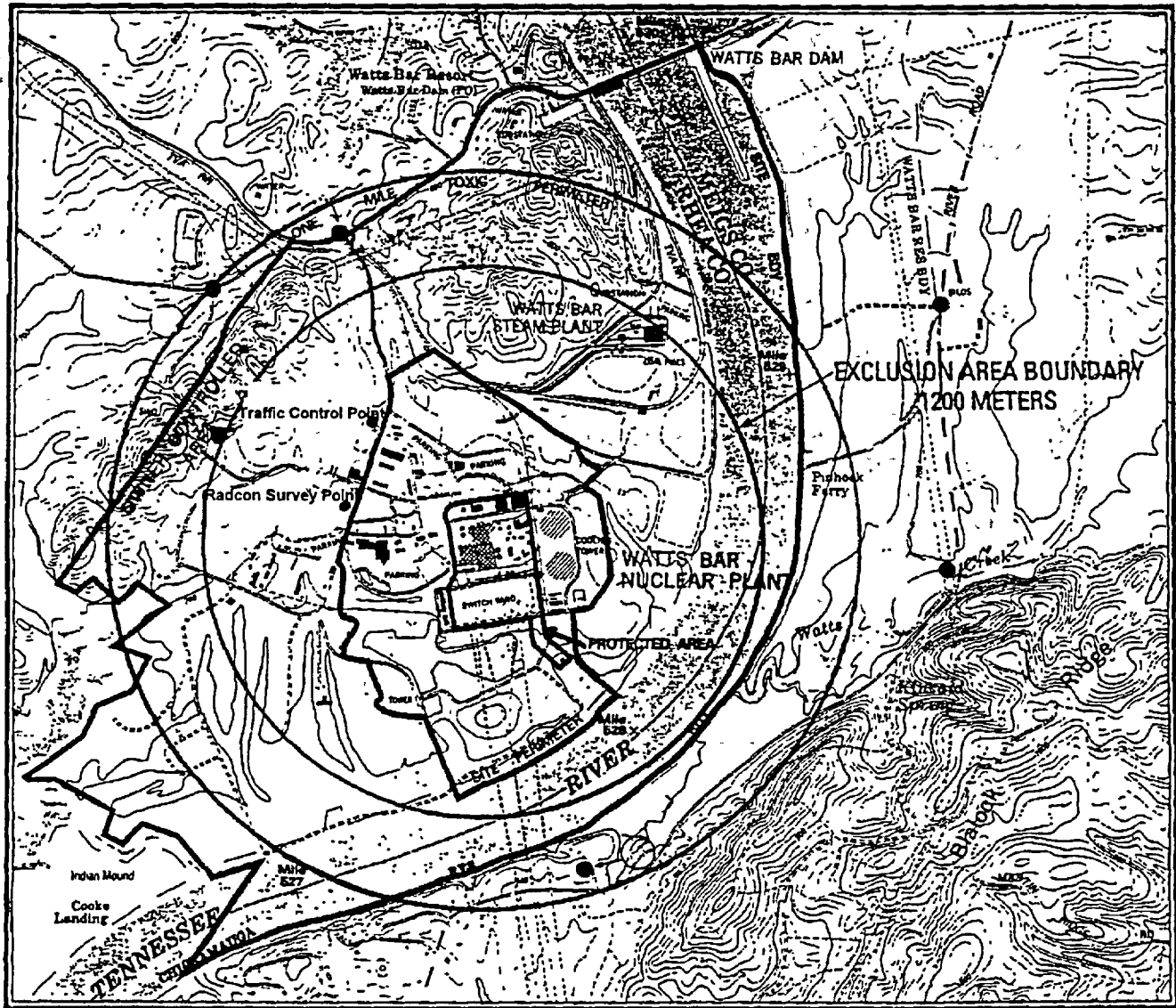
**CONSIDER** first the precautionary evacuation of all non-essential personnel (outside the Protected Area) from the site. These personnel will be assembled in their designated near site assembly areas. (**Appendix B & C**) Once completed, non-essential personnel within the Protected Area can be evacuated (**Appendix A**).

10. **NOTIFY** the TSC Security Manager or SM/SED upon completion of evacuation of site non-essential personnel.

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

APPENDIX H  
(Page 3 of 3)

## PROTECTED SITE PERIMETER/OWNER CONTROLLED AREA MAP



APPENDIX I  
Page 1 of 2

**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 site evacuation.

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 is needed and has not been established at the Owner Controlled Area (OCA), then: ☐  
DISPATCH RADCON personnel to the OCA Emergency Survey Point # 15.

AND

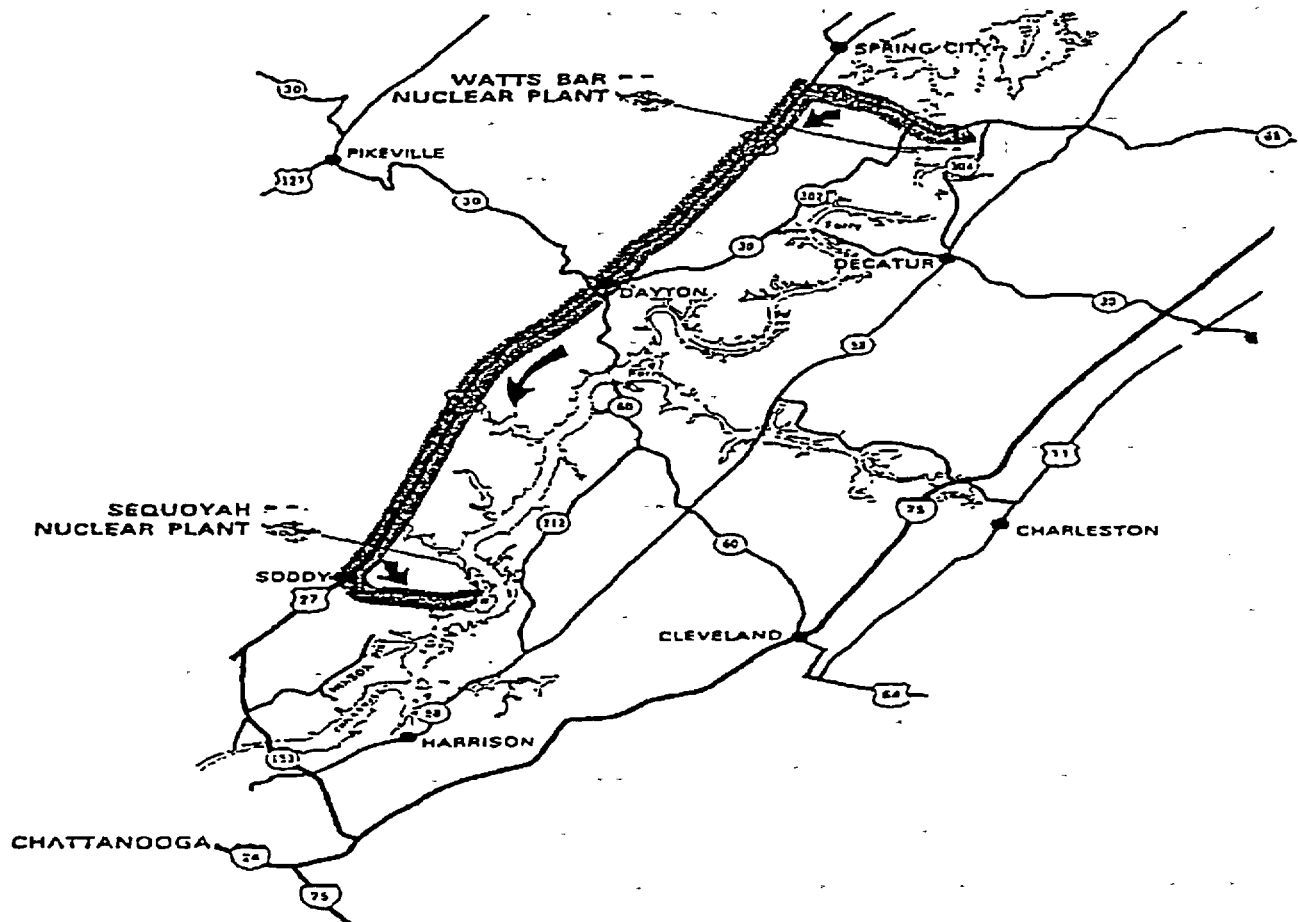
ESTABLISH a RADCON survey checkpoint.

3. IF... Radiological concerns merit the spraying down of vehicles prior to site exiting. Notify the TSC or SM/SED to have the Fire Truck dispatched to this location. Hydrant # 0 HYD 026-3108 is near the emergency survey point and adequate water run-off to drainage is available ☐

4. IF plant conditions preclude radiological decontamination, evacuees will be informed of transportation, sheltering, and decontamination arrangements prior to leaving the site. The primary evacuation shelter for onsite contaminated personnel will be Sequoyah Nuclear Plant (SQN), approximately 50 miles south of Watts Bar Nuclear Plant (WBN). RADCON personnel from the plant site, SQN, and CECC will respond to SQN to support personnel decontamination activities if there is a need. Initials Time

APPENDIX I  
(Page 2 of 2)RADCON  
ASSEMBLY/ACCOUNTABILITY/EVACUATION  
GUIDELINES

## DIRECTIONS TO (SQN) SEQUOYAH NUCLEAR PLANT



APPENDIX J  
Page 1 of 1

# ACCOUNTABILITY ROSTER

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

Facility: \_\_\_\_\_

[illegible]

## FILING INSTRUCTIONS

DOCUMENT NUMBER EPIP - 11

REMOVE REVISION 9 INSERT REVISION 10

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**TENNESSEE VALLEY AUTHORITY**  
**WATTS BAR NUCLEAR PLANT**  
**EMERGENCY PLAN IMPLEMENTING**  
**PROCEDURES**

**EPIP-11**

**SECURITY AND ACCESS CONTROL**

Revision 10

Unit 0

**NON-QUALITY RELATED**

PREPARED BY: F. L. Pavlechko  
(Type Name)

SPONSORING ORGANIZATION: Emergency Planning

APPROVED BY: Frank L. Pavlechko

EFFECTIVE DATE: 07/30/02

LEVEL OF USE: REFERENCE



<b>WBN</b>	<b>SECURITY AND ACCESS CONTROL</b>	<b>EPIP-11 Revision 10 Page 2 of 11</b>
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**REVISION DESCRIPTION:**

<b>Revision Number</b>	<b>Implementation Date</b>	<b>Pages Affected</b>	<b>Description of Revision</b>
5	2/15/97	3, 5, 6, 7, 8, 11	Editorial non-intent revisions made. SOS revised to SM. Records section added. Information note added to Security in Section 3.3. Contingency(s) titles added to Section 3.6. Owner controlled area ID added to map in Appendix A. JIC map revised.
6	6/30/98	All	Non-intent Change. Revised location of LNC.
7	6/14/00	All	Non Intent change. Revised title of WBN Communications Specialist. This revision resolves problem identified in WBN PER, 006394.
8	9/25/01	All pg. 7	Intent change. Procedure revised to Non-Quality related per requirements of NQAP & pending revision to SPP-2.2. The coversheet and records section of the procedure was revised to reflect this change.
9	06/05/02	All 2, 6	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP.  Non-intent change(s): are based on enhanced Security requirements directed by the NRC. Security actions and Media Contingencies wording enhanced in 3.6 for the disposition of media personnel arriving at the site after a REP emergency situation or when the JIC is not activated.
10	07/30/02	All 2, 3, 4, 6-8	Plan effectiveness determinations on these changes indicate the following revisions do not reduce the level of effectiveness of the procedure or REP.  Intent changes made to the procedure to support the NRC Safeguards Advisory and actions associated with IN 2002-14. (ie) Specified the requirement for a declared emergency in the procedure purpose. The TCP point at Route 68 was moved to its new location. The emergency responder car window placard was eliminated along with the appendix. The appendices were re-designated. EPIP-8 was referenced in the instructions. New picture provided for appendix A.

WBN	SECURITY AND ACCESS CONTROL	EPIP-11 Revision 10 Page 3 of 11
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## 1.0 PURPOSE<sup>2</sup>

This Procedure provides guidelines for Nuclear Security (NS) to implement access control during a Declared Radiological Emergency.

This EPIP does not address security problems/contingencies that may arise during a radiological emergency. These problems **shall** continue to be handled in accordance with the approved Security Contingency Plan.

## 2.0 RESPONSIBILITIES<sup>2</sup>

- A. Nuclear Security will implement these Instructions in conjunction with WBN EPIP-8, "Personnel Accountability and Evacuation," or as directed by the Site Emergency Director (SED).
- B. The WBN Emergency Preparedness Manager will establish and maintain an "Emergency Response Organization Call List" comprised of current qualified responders. This list will be provided to Nuclear Security and updated quarterly.
- C. The Site Security Manager **shall** establish an instruction which delineates specific requirements to be performed by NS during a radiological emergency. This instruction **shall** address directed requirements for the security force contained in this Procedure.

## 3.0 INSTRUCTIONS

### 3.1 Designated Site Areas<sup>1</sup>

- A. The "Protected Area" is the area encompassed by physical barriers (i.e. security fence) which surrounds the plant (Reactor, Auxiliary, Control, Turbine, and Service Buildings, Switchyard, Intake Pumping Station, and Diesel Generator Buildings) through which access is controlled. (Appendix A - map)
- B. The "Site Perimeter" is the area between the protected area and the outermost fence/buildings surrounding the plant. (Appendix A - map)
- C. The "Owner-Controlled Area" is the area which lies between the site perimeter and the TVA Site boundary. (Appendix A - map)

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### 3.0 INSTRUCTIONS (continued)

#### 3.2 Access Control to the Protected Area during Emergencies <sup>1</sup>

- A. If directed by the SM/SED, NS will restrict access to the Protected Area during any emergency situation at Watts Bar that has resulted in conditions within the Protected Area which warrant accountability and or evacuation (i.e., Alert, Site Area Emergency, or General Emergency.)
- B. As directed by the SM/SED or TSC Security Manager, onsite hazards should be identified to the emergency responder prior to entering the Protected Area using the hazards awareness board in the Access Portal.
- C. Emergency responders whose names appear on the Emergency Response Organization Call List or as authorized by the SED or NS representative in the TSC or OSC Manager will be authorized access.
- D. NRC Personnel have authorized access.
- E. Personnel allowed entry will be responsible for entering into the accountability card readers as soon as possible after entering the protected area.
- F. Fire protection vehicles, radiological control (RADCON) monitoring vans, and other emergency vehicles and personnel will be permitted immediate access upon confirmation with the SED that an onsite emergency does exist and their service has been requested.

#### 3.3 Access to the Owner Controlled/Site Perimeter Area <sup>1</sup>

NS will control access at the OCA Traffic Control Point (**Appendix A** - map). Access control will be as follows:

- A. **GRANT** access to those individuals who display a site or other TVA photo ID badge

WBN	SECURITY AND ACCESS CONTROL	EPIP-11 Revision 10 Page 5 of 11
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### 3.0 INSTRUCTIONS (continued)

#### 3.3 Access to the Owner Controlled/Site Perimeter Area<sup>1</sup>

- B. **GRANT** access to those individuals whose names are indicated on the Emergency Response Organization Call List and/or other approved list as provided by the SED, TSC Security Manager, or OSC Manager.
- C. **GRANT** access to others as verbally approved by the SED or NS representative in the TSC.
- D. As **DIRECTED** by the TSC Security Manager/Security Shift Supervisor, onsite hazards should be identified to the emergency responder prior to entering the site.
- E. The following offsite support organizations will be permitted immediate access to the owner controlled area:
  - Fire protection vehicles
  - Ambulances
  - Law enforcement Agencies
  - Explosive Ordinance Detachment (EOD Military)
  - RADCON Vans
  - Nuclear Regulatory Commission (NRC)
  - Federal Emergency Management Agency (FEMA)
  - INPO and Westinghouse
  - Tennessee Emergency Management Agency (TEMA)

**NOTE** Personnel identification cards, uniforms, vehicle markings or letter of access may be used for identification.

**NOTE** Appendix B (Radiological Emergency Access Log Sheet) or similar form may be used to account for individuals/vehicles gaining access to the site during a radiological emergency. If emergency vehicles are responding to an immediate/ongoing emergency they should not be delayed but quickly identified and escorted (if security staff are available).

**NOTE** Unauthorized personnel found in the owner controlled area will be reported to the TSC Security Manager for egress instructions.

#### 3.4 Egress Control from the Protected Area<sup>1</sup>

- A. Upon hearing the assembly/accountability siren, individuals whose assembly areas are outside of the protected area will be permitted to exit the protected area.

WBN	SECURITY AND ACCESS CONTROL	EPIP-11 Revision 10 Page 6 of 11
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### 3.0 INSTRUCTIONS (continued)

#### 3.4 Egress Control from the Protected Area<sup>1</sup>

- B. Emergency vehicles and personnel, including RADCON monitoring vans, will be allowed immediate egress from the protected area during an ongoing radiological emergency.
- C. In the event of a Protected Area evacuation, site personnel will receive instructions from the SM or the TSC/SED concerning what actions to take prior to exiting the Protected Area. Security personnel will follow the instructions provided in EPIP-8 "Personnel Accountability and Evacuation and/or the Physical Security Plan.

#### 3.5 Egress Control from the Site Area and Owner Controlled Area<sup>1</sup>

- A. Egress from the owner controlled area will be authorized only after RADCON completes a survey (if radiological release has occurred) or as granted by the SED through the TSC, NS Manager.
- B. NS will provide traffic control (if security staff are available).

#### 3.6 Security and Media Contingencies

- A. This EPIP does not address security problems that may arise during a radiological emergency. These problems shall continue to be handled in accordance with the approved Security Contingency Plan.
- B. Press personnel who respond to WBN during an emergency will be directed to the Joint Information Center (JIC) in Chattanooga. (Appendix C)
- C. If the emergency situation has been terminated or the JIC has not been activated and Press personnel respond to the site, the Owner Controlled Area Security Traffic Control Point will notify the SM or SED. Once approval has been granted by the Plant Duty Manager and escorts are provided, the Press will be directed to the WBN Local News Center (LNC) which is classroom 19 in the Training Center to await a briefing or additional instructions.
- D. The WBN Communications Specialist should be notified as soon as possible of the situation (i.e., numbers of people, from: TV, radio, etc.).

WBN	SECURITY AND ACCESS CONTROL	EPIP-11 Revision 10 Page 7 of 11
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#### 4.0 REFERENCES

- A. Site Physical Security Plan
- B. WBN EPIP-8 Personnel Accountability and Evacuation
- C. NP Radiological Emergency Plan (REP)
- D. NUREG 0654
- E. Title 10 Code of Federal Regulations Part 20 and 50
- F. ANSI N18.7-1976

#### 5.0 ATTACHMENT

- A. Appendix A Owner Controlled, Site Perimeter and Protected Area Map
- B. Appendix B Radiological Emergency Access Log Sheet
- C. Appendix C TVA, JIC Directions

#### 6.0 Records

- A. Non-QA Records

All records generated during the course of a declared emergency, exercise or drill, will be sent to the EP Manager and stored appropriately.





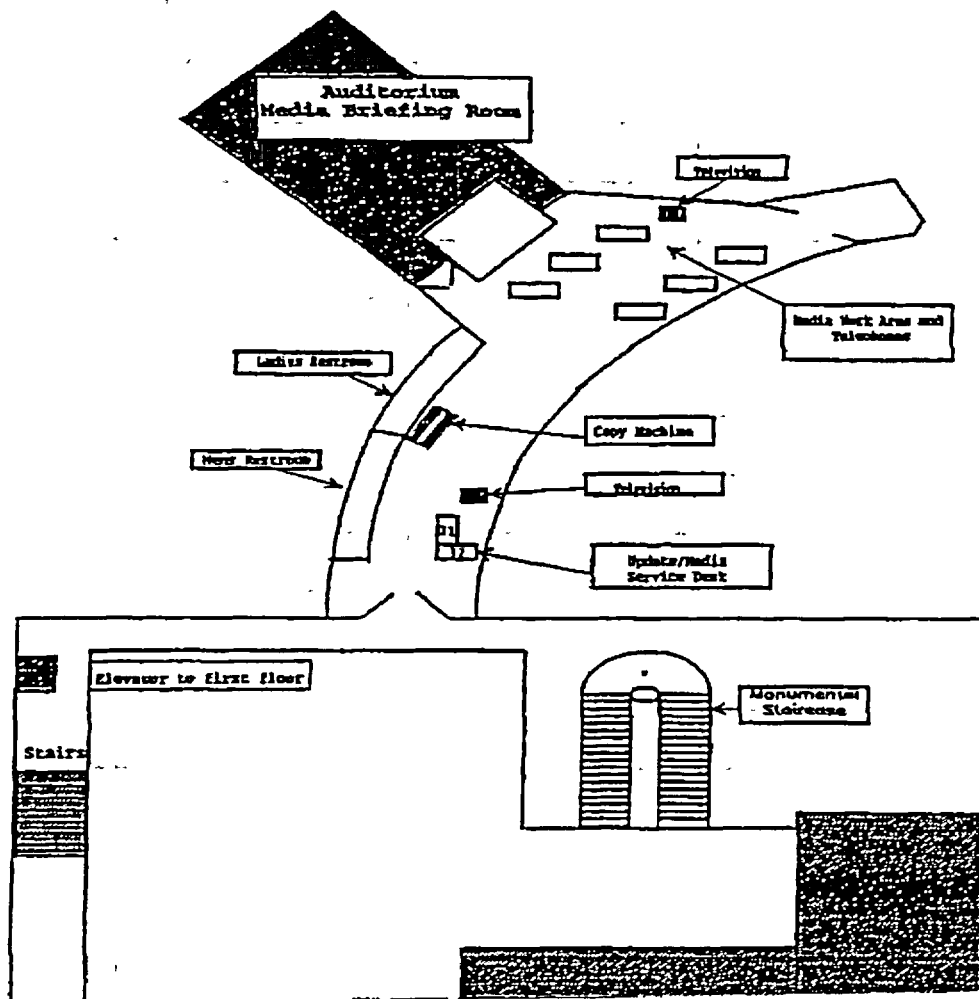


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APPENDIX C  
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Directions to the  
TVA Joint Information Center (JIC)

Follow Rt. 68 West to Rt. 27 South. Stay on 27 South to the Martin Luther King exit. Follow Broad Street to the TVA Chattanooga Office Complex (COC). The JIC is located in the Missionary Ridge Building.



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# **SOURCE NOTES**

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- 1      BR-77080, BF-00006, IEB-0025,  
NCO-920047022.      WBN procedures allow emergency ingress and unimpeded egress for any postulated occurrence. Section 3.0 Instructions, Section 3.2 Access Control to the Protected Area during Emergencies, 3.3 Access Control to the Owner Controlled/Site Perimeter Area, 3.4 Egress Control from the Protected Area and 3.5 Egress Control from the Site Area and Owner Controlled Area. Also see EPIP-8.
  
- 2      ANSI N18.7-1976      EPIPs will contain the following  
Subsection 5.3.9.3: 01 POI      elements