



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

April 28, 2003

10 CFR 50,  
Appendix E  
Section V

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

Gentlemen:

In the Matter of	)	Docket Nos.	50-259	50-390
Tennessee Valley Authority	)		50-260	50-391
			50-296	50-327
				50-328

TVA CENTRAL EMERGENCY CONTROL CENTER (CECC) - EMERGENCY PLAN  
IMPLEMENTING PROCEDURE (EPIP) REVISIONS

In accordance with the requirements of 10 CFR Part 50, Appendix E,  
Section V, enclosed are copies of the Effective Page Listing and  
revisions to CECC EPIPs.

PROCEDURE		EFFECTIVE DATE
EPIP	EPL	3/31/03
EPIP-1	Rev. 37	3/31/03
EPIP-2	Rev. 30	3/31/03
EPIP-3	Rev. 31	3/31/03
EPIP-4	Rev. 32	3/31/03
EPIP-5	Rev. 34	3/31/03

If you have any questions, please contact Terry Knuettel at  
(423) 751-6673.

Sincerely,

*Mark J. Burzynski*  
Mark J. Burzynski  
Manager  
Nuclear Licensing

Enclosures  
cc: See page 2

A045

U.S. Nuclear Regulatory Commission  
Page 2  
April 28, 2003

cc (Enclosures):

U.S. Nuclear Regulatory Commission (Enclosures 2)  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23T85  
Atlanta, Georgia 30303-8931

NRC Senior Resident Inspector [Enclosures provided  
Browns Ferry Nuclear Plant by site DCRM]  
10833 Shaw Road  
Athens, Alabama 35611-6970

NRC Senior Resident Inspector [Enclosures provided  
Sequoyah Nuclear Plant by site DCRM]  
2600 Igou Ferry Road  
Soddy Daisy, Tennessee 37379-3624

NRC Senior Resident Inspector [No enclosures, by request  
Watts Bar Nuclear Plant of site resident]  
1260 Nuclear Plant Road  
Spring City, Tennessee 37381

# DOCUMENT RELEASE AND FILING INSTRUCTIONS

Page 1 of 2  
Release No. \_\_\_\_\_

To: **Management Services/RIM/EDM**

Other \_\_\_\_\_

Address: \_\_\_\_\_

Date Submitted to Management \_\_\_\_\_

Services/RIM/EDM: \_\_\_\_\_

Date to Filed By: \_\_\_\_\_

Prepared By: \_\_\_\_\_

Gail White

Extension: \_\_\_\_\_

751-2108

Organization: \_\_\_\_\_

AS&P

Address: \_\_\_\_\_

LP 4D-C

Attached are: (select one)

☒ QA Records/Documents

☐ Non-QA Records/Documents

Release and Submitted for:

☒ Distribution

☒ Retention

DOCUMENT NUMBER	REV	NO. PAGES	REC ACCT		DATE	REMOVE PAGES	INSERT PAGES
			Y	N			
CECC-EPIP							
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CECC EPIP-1, rev. log	37	13	✓		3-31-03	R36 rev. log	rev. log
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CECC EPIP-4, cover sheet	32	1	✓		3-31-03	R31 cover sheet	cover sheet
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CECC EPIP-4	32	8	✓			All	1 - 8
CECC EPIP-5, cover sheet	34	1	✓		3-31-03	R33 cover sheet	cover sheet
CECC EPIP-5, rev. log	34	2	✓		3-31-03	rev. log	rev. log
CECC EPIP-5	34	10	✓			All	1 - 10

Date

Acceptance:

*Lana L. Farmer*

Signature

3-28-03

Date

Contact \_\_\_\_\_

Ext \_\_\_\_\_

[illegible]

TENNESSEE VALLEY AUTHORITY  
CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN  
IMPLEMENTING PROCEDURES  
LIST OF EFFECTIVE PAGES

This list of effective pages must be retained with the CECC-EIPs.

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Tennessee Valley Authority	Title	CECC EPIP-1 REV. 37										
CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN IMPLEMENTING PROCEDURES	CENTRAL EMERGENCY CONTROL CENTER (CECC) OPERATIONS	Effective Date: <u>3/31/03</u>										
<p>WRITTEN BY: <u>Thomas F. Adkins</u> Signature</p> <p>REVIEWED BY: <u>[Signature]</u> Signature      <u>3/6/03</u> Date</p> <p>PLAN EFFECTIVENESS DETERMINATION: <u>Thomas F. Adkins</u> Signature      <u>3/5/03</u> Date</p> <p style="text-align: center;"><b>CONCURRENCES</b></p> <table border="1"> <thead> <tr> <th>Concurrence Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <u>[Signature]</u></td> <td><u>3/25/2003</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Emergency Preparedness <u>[Signature]</u></td> <td><u>3/26/03</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <u>[Signature]</u></td> <td><u>3/27/03</u></td> </tr> <tr> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>			Concurrence Signature	Date	<input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <u>[Signature]</u>	<u>3/25/2003</u>	<input checked="" type="checkbox"/> Manager, Emergency Preparedness <u>[Signature]</u>	<u>3/26/03</u>	<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <u>[Signature]</u>	<u>3/27/03</u>	<input type="checkbox"/>	
Concurrence Signature	Date											
<input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <u>[Signature]</u>	<u>3/25/2003</u>											
<input checked="" type="checkbox"/> Manager, Emergency Preparedness <u>[Signature]</u>	<u>3/26/03</u>											
<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <u>[Signature]</u>	<u>3/27/03</u>											
<input type="checkbox"/>												

APPROVED BY: Mark Brzezinski Vice President, E&TS 3/27/03  
Signature Title Organization Date

CECC-EPIP-1  
CENTRAL EMERGENCY CONTROL CENTER  
OPERATIONS

REVISION LOG

Rev. No.	Date	Revised Pages
0	3/22/88	All (Formerly IP-18. Changed from IPD to EPIP)
1	11/18/88	1, Appendix A
2	4/26/89	All
3	7/13/89	Appendix A
4	10/26/89	2, Appendix A
5	5/23/90	All (formerly EPIP-5)
6	7/2/90	Appendix C, Pg. 1 (only)
7	9/14/90	Pg. 5; App. D, Pg. 3; App. G, Pg. 1; App I, Pg 1
8	5/21/91	App. A, Pg. 1,5; App. C, Pg. 1, App. D, Pgs. 1-3; App. G, Pgs. 3-4; App. H, Pgs. 1-2; App. I, Pg. 2
9	10/17/91	App. C, Pg. 1; App. D, Pg. 2; App. G, Pg. 1.
10	05/15/92	App. E, Pg. 2 revised; new coversheet & rev. log added. All pages issued.
11	05/26/92	Page 5
12	11/25/92	App. B, Pg. 1; App. G, Page 1 of 4
13	03/08/93	App. I, Pages 1-2
14	05/17/93	2-5, App. A, Pg. 1; App. B, Pg. 1; App. D, Pgs. 1-4; App. H deleted.
15	07/19/93	Appendix D, Pgs. 1-5. All pages issued.
16	09/13/93	Appendix C, Pg. 1; Appendix G, Pg. 2. All pages issued.
17	11/30/93	Pgs. 1 & 5; App. A, Pg. 3; App. C, Pgs. 2 & 3; App. D, Pgs. 1-3; App. E deleted; App. I changed to App. H; App. J changed to App. I.
18	04/19/94	Pgs. 1-5; App. A, Pgs. 1-5; App. B; App. C, Pgs. 1-3; App. D, Pgs. 1-2; App. F; App. G, Pgs. 1-4; App. H, Pgs. 1-2; App. I
19	6/26/95	Pgs. 1 and 5; App. A, Pgs. 2 and 4; App. E; all pages issued.
20	11/01/95	Revised PAR Diagram. All pages issued.

CECC-EPIP-1  
CENTRAL EMERGENCY CONTROL CENTER  
OPERATIONS

REVISION LOG (Continued)

Rev. No.	Date	Revised Pages
<u>21</u>	<u>10/30/96</u>	<u>Revised PAR Diagram, revise State Update Form, revise</u> <u>CECC Dir. Checklist, add telephone suspended rate</u> <u>activation/deactivation information. Put EPIP in new format.</u> <u>All pages issued.</u>
<u>22</u>	<u>4/7/97</u>	<u>Annual review, editorial changes, revise CECC Director checklist.</u> <u>Identify positions that can fill TVA spokesperson position. All</u> <u>pages issued.</u>
<u>23</u>	<u>3/6/98</u>	<u>Annual review, remove old appendix B and relabel app. C - H</u> <u>as app. B - G. On page 1 of old app. F clarify order of CECC Dir</u> <u>Notifications. All pages issued.</u>
<u>24</u>	<u>11/20/98</u>	<u>Add instruction for CECC Director to inform SED where the</u> <u>State has been notified of an emergency classification change.</u> <u>Add EAL designator to State Update Form, update Alabama</u> <u>telephone area code prefix. All pages issued.</u>
<u>25</u>	<u>2/22/99</u>	<u>Revise PAR diagram, add CECC Director duty to request</u> <u>federal assistance through the NRC. Annual review. All pages</u> <u>issued.</u>
<u>26</u>	<u>5/1/99</u>	<u>Revise PAR diagram. All pages issued.</u>
<u>27</u>	<u>5/20/99</u>	<u>Revise instructions for suspended rate telephone line activation.</u> <u>All pages issued.</u>
<u>28</u>	<u>7/16/99</u>	<u>Pages 6, 16, and 26 were revised to ensure complete PAR</u> <u>information is provided to the State. On page 19 an editorial</u> <u>correction was made. All pages issued.</u>
<u>29</u>	<u>11/15/99</u>	<u>Changes made to make forms easier to use (App. B, E, F and H)</u> <u>and for clarity. Phone numbers updated in Appendix G. Added</u> <u>reference to ITSC, editorial changes. All pages issued.</u>
<u>30</u>	<u>8/17/00</u>	<u>Annual review. Revise PAR diagram. All pages issued.</u>
<u>31</u>	<u>10/2/00</u>	<u>Add listing of all evaluation sectors for each plant to Appendix H.</u> <u>Add step to CECC Director checklist to announce classification</u> <u>changes to the CECC staff and to the TVA spokesperson. All</u> <u>pages issued.</u>
<u>32</u>	<u>11/13/00</u>	<u>Clarify responsibilities of the CECC Director and the State</u> <u>Communicator concerning transmittal of hard copy information</u> <u>related to classifications and PARs to the State.</u>



CECC-EPIP-1  
CENTRAL EMERGENCY CONTROL CENTER  
OPERATIONS

REVISION LOG (Continued)

<u>Rev. No.</u>	<u>Date</u>	<u>Revised Pages</u>
<u>33</u>	<u>2/5/01</u>	<u>Correct PAR diagram. All pages issued.</u>
<u>34</u>	<u>3/30/01</u>	<u>Annual review. Add new PAR diagram. Add CECC Director briefing instruction. Add instruction for RAM to monitor rad. EAL trigger point. Editorial changes. All pages issued.</u>
<u>35</u>	<u>9/7/01</u>	<u>Revise Appendix H. All pages issued.</u>
<u>36</u>	<u>6/13/02</u>	<u>Annual review. Add Agency Control Center information, add TPS notification, revise State Update Form, update State Communicator Checklist, revise suspended rate telephone information, revise CECC Directors PAR Form to incorporate elements from the RAD Assessment PAR Form which was combined with this form. All Pages issued.</u>
<u>37</u>	<u>3/31/03</u>	<u>Procedure put in new format. Annual review comments incorporated. Position checklists updated. KI recommendation added to Appendix I. All pages issued.</u>

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CENTRAL EMERGENCY CONTROL CENTER (CECC) OPERATIONS

1.0 PURPOSE

This procedure is designed to direct the CECC Director and staff to ensure consistent, accurate, and timely response to the events of an accident. This procedure further serves to identify the necessary information to provide for prompt, accurate, public protective action recommendations to appropriate State authorities.

2.0 SCOPE

This procedure covers anticipated requirements of the CECC Director and staff during an emergency classification of Notification of Unusual Event (if it is decided to staff or partially staff the CECC), Alert, Site Area Emergency, or General Emergency

3.0 STAFFING

Responsibilities for CECC staff are contained in Attachments to this procedure as well as in other CECC EIPs. The CECC Director may also obtain assistance from other organizations within TVA. Representatives from these organizations may report to the CECC if requested by the CECC Director. Representatives and notification information are provided in the REND.

3.1 Activation and Notification

The initial notification of an event comes from the ODS via the Emergency Paging System, or by manual call out. Activation of non-duty personnel for unscheduled work shall meet FFD criteria and be documented using Appendix M.

3.2 Emergency Duty Officer (EDO)

The EDO is responsible for establishing initial operability of the CECC upon activation of the center. This position will obtain information from the ODS pertinent to the event and make this information available to key CECC positions. The EP Staff will advise the CECC Director on the REP, notification requirements and operation of the CECC. A checklist for this position is provided in Appendix A.

3.3 CECC Director

The CECC Director is responsible for directing TVA's overall response to the emergency. The CECC Director ensures that Federal, State, and local agencies are notified in accordance with established procedures and that they are kept fully informed of all aspects of the emergency. The Director reviews with the Plant Assessment and Radiological Assessment Managers the onsite and offsite consequences of the accident and assesses the adequacy and need for measures taken for protection of the public. The Director coordinates TVA's efforts with State and Federal agencies involved in the offsite aspects of the emergency and requests any required federal assistance through the NRC. Checklists for the CECC Director are provided in Appendices B through G. After the appropriate level of CECC activation the CECC Director is responsible for the following:

- Approves all press releases developed in the CECC
- Notifies the appropriate state authority of any emergency classification upgrades.
- Makes any required Protective Action Recommendations (PARs) to the appropriate state authority using Appendix I

**3.4 Plant Assessment Manager**

Plant Assessment Manager Responsibilities are contained in CECC EPIP-6.

**3.5 Radiological Assessment Manager**

Radiological Assessment Manager responsibilities are contained in CECC EPIP-7.

**3.6 Public Information Manager**

Public Information Manager responsibilities are contained in CECC EPIP-14.

**3.7 State Communicator**

The State Communicator shall ensure that all information required by State authorities to perform their assessment function and carry out necessary protective actions is being provided to them in a timely and accurate manner (see Appendix K). The CECC Director shall review for accuracy and approve all information being transmitted to the State in hardcopy form. (This excludes the automatic transmittal of the radiological assessment working information such as met data, dose code runs, plume plots, and field measurements sent to the State Radiological Health Assessors.) Checklists for this position are provided in Appendix J.

**3.8 TVA Liaison to the State**

For a classification of SITE AREA EMERGENCY OR GENERAL EMERGENCY, the CECC Director will coordinate with the REP staff representative the selection of a TVA liaison to the State Emergency Operations Center (EOC) in Tennessee or the SRMAC in Alabama. The CECC Director will authorize travel to the State facilities for the purpose of providing technical information, advice, and interpretation to State personnel. The TVA Liaison will also ensure that the State is getting all required information from the CECC.

Primary duties of the TVA Liaison to the State facilities are as follows:

- Technical explanations and clarification on plant status.
- Assist the State by keeping them informed of available TVA resources.
- Assist the State in describing/clarifying TVA's response to the emergency, understanding TVA's emergency organization, key TVA staff positions, etc.
- Maintains contact with the CECC State Communicator to ensure that all required information is being provided by the CECC.

**3.9 Technical Advisors**

The CECC Director will coordinate with the Plant Assessment Manager the selection of people to serve as a technical advisor to the Public Information Manager and staff and also to the State Communicator in the CECC. RADCON and/or Plant Operations advisors may also be selected to be sent to the appropriate State Emergency Operations Center. The advisors will be responsible for providing a nontechnical interpretation of the event for the CECC Public Information Staff.

If the JIC is to be staffed, the CECC Director will coordinate with the Plant Assessment and Radiological Assessment Managers the selection of radiological health and plant operations advisors to serve as technical advisors to the TVA spokesperson located there. These people will be responsible for assisting the TVA spokesperson in interpreting the approved press releases and events taking place.

Entire Procedure Revised.

**3.10 Management Services Supervisor**

The Management Services Supervisor oversees clerical and administrative support to the CECC. A checklist for this position is provided in Appendix L

**3.11 State Liaison (State Government Representative)**

The State Liaison role in the CECC is to observe events taking place, licensee response actions, and advise the State agencies appropriately throughout the emergency. He will receive assistance as necessary from the State Communicator. The State Liaison can also coordinate State support for TVA.

**3.12 Provisions for NRC**

Provisions have been made to provide workspace for a contingent of NRC staff in the CECC. These provisions include the NRC's FTS 2000 Emergency Telecommunications System. The following dedicated circuits are available: Health Physics Network (HPN), Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL), Emergency Notification System (ENS), Local Area Network (LAN). HPN and ENS extensions are provided for TVA use as required.

**4.0 CECC RESPONSIBILITIES**

**4.1 Evaluation of Conditions**

The CECC staff maintains an awareness of plant conditions to assess the impact on the environment, the site, and to provide technical and logistical support to the site.

**4.2 Interface with the State**

The CECC provides the State with information on the emergency classification, plant conditions, offsite radiological conditions and Protective Action Recommendations (PARs). The State provides the CECC with information concerning State activities in response to the emergency.

**4.3 Protective Action Recommendations**

The CECC evaluates plant and radiological conditions and develops Protective Action Recommendations to be provided to the State to assist with decision making for the protection of the health and safety of the public.

**4.4 Public Information**

The CECC ensures timely and accurate information is provided to the public. The CECC will coordinate efforts with offsite authorities.

**4.5 Regulatory Interface**

The NRC role in the CECC is to observe and advise as appropriate with licensee decisions and actions.

The CECC Director may request that the Federal Radiological Emergency Response Plan (FRERP) be activated via the NRC.

#### **4.6 Termination of the Emergency**

The CECC Director will inform each emergency center when the SED has terminated the emergency and planning for the recovery phase has begun.

Upon termination of the emergency, the CECC Director and staff will make themselves available to the TVA, NRC, and other official event reviewers for review of the accident.

Appropriate recovery efforts shall be initiated upon termination of the emergency. The Senior Vice President, Nuclear Operations, or his designee, will direct the overall recovery efforts for response to an emergency in accordance with the general guidelines provided in the REP and CECC-EPIP-13. As judgment and events determine, additional resources outside of TVA may be required to mitigate the consequences of an emergency.

#### **5.0 REFERENCES**

Radiological Emergency Plan (REP)

#### **6.0 ABBREVIATIONS AND DEFINITIONS**

ACC - Agency Control Center  
AEMA - Alabama Emergency Management Agency  
CECC - Central Emergency Control Center  
EDO - Emergency Duty Officer  
FCC - Field Coordination Center  
FRERP - Federal Radiological Emergency Response Plan  
JIC - Joint Information Center  
NCO - Nuclear Central Office  
NRC - Nuclear Regulatory Commission  
ODS - Operations Duty Specialist  
R/H - Radiological Health  
RMCC - Radiological Monitoring Control Center  
SRMAC - State Radiological Monitoring and Assessment Center  
TEMA - Tennessee Emergency Management Agency  
TSC - Technical Support Center  
ITSC - Information Technical Service Center

CENTRAL EMERGENCY CONTROL CENTER (CECC) OPERATIONS	CECC EPIP-1	Page 6 of 33 Revision 37
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APPENDIX A  
(Page 1 of 1)  
EMERGENCY DUTY OFFICER (EDO) AND EP STAFF CHECKLIST

	Check box when action complete	Action
1		Upon reporting to the CECC review with the ODS the status of the following items and ensure any required actions are performed:  <input type="checkbox"/> State notification of the event <input type="checkbox"/> CECC staffing response <input type="checkbox"/> Security established for the CECC <input type="checkbox"/> Event forms copied <input type="checkbox"/> SED informed of State notification
2	<input type="checkbox"/>	Activate the CECC PA located in the room behind the ODS console.
3	<input type="checkbox"/>	Turn on the 8 video projectors.
4	<input type="checkbox"/>	Place proper EPZ maps on the walls.
5	<input type="checkbox"/>	Check the telephone recorder in the computer room and place new tapes in the recorder if necessary.
6	<input type="checkbox"/>	Call Facilities at 751-3775 or the TVA Operator to have light points E16018 & E16019 in the CECC turned on during non-business hours.
7	<input type="checkbox"/>	Establish contact with the CECC Director.

Completed by	Name:	Date:
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**GENERAL OPERATIONS**

1. Advises the CECC Director regarding all aspects of the REP and operation of the CECC. Confirms the CECC is set up and operating properly.
2. Assists the CECC Director in operating the CECC by evaluating, compiling, documenting, and posting data concerning the emergency situation.
3. Assists the CECC Director in ensuring that all required State notifications are made for emergency classifications and PARs.

CENTRAL EMERGENCY CONTROL CENTER (CECC) OPERATIONS	CECC EPIP-1	Page 8 of 33 Revision 37
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**APPENDIX B**  
(Page 2 of 2)

**CECC DIRECTOR RESPONSIBILITIES FOR CECC ACTIVATION AND OPERATION**

7	<input type="checkbox"/>	If the Agency Command Center (ACC) is activated then assign an Assistant CECC Director (from the pool of Primary or Assistant CECC Directors) as the TVAN representative.
8	<input type="checkbox"/>	Notify the Senior Nuclear Executive and review event information.
9	<input type="checkbox"/>	Ensure the ODS has informed the Senior Management Executive of the CECC activation.
10	<input type="checkbox"/>	Conduct initial CECC briefing (see position notebook).
11	<input type="checkbox"/>	When the event terminates refer to checklist (see EPIP-13)

Completed by:	Name:	Date:
---------------	-------	-------

**GENERAL OPERATIONS**

1. Log key events and major actions taken. Maintains accurate records of decisions made and actions started and completed.
2. Consult with SED on EALs, major site actions, and plant conditions.
3. Conduct briefings. The CECC Director should initially and periodically (approximately hourly) remind the CECC staff of the need for accuracy and consistency in the development and review of technical information, news releases, PARs, and State Update forms. The CECC staff should be reminded of the effect of various distractions (such as time restraints, noise, stress, and attention to competing tasks) can have on accuracy and efficiency. The Director should stress the need for the staff to manage distractions in a manner to prevent negative impacts on the accuracy of written, oral, and electronic communication from the CECC.
4. Coordinate with the JIC Spokesperson times of anticipated JIC briefings and provide status updates prior to the JIC briefings.
5. Ensures that Federal, State, and local agencies are notified in accordance with established procedures and that they are kept fully informed of all aspects of the emergency. Review anticipated state actions and discuss with State.
6. The CECC Director is authorized to request Federal assistance through the Federal Radiological Emergency Response Plan (FRERP) via the NRC.
7. Commits TVA resources and provides necessary information to assist the State, Federal, and local agencies to the extent possible.
8. Coordinates TVA's efforts with State and Federal agencies involved in the offsite aspects of the emergency.
9. Should operations be expected to last for an extended period, the CECC Director originates a schedule for relief. The duties of CECC staff should only pass to individuals identified as alternates for those positions. The Management Services Supervisor may be used to perform notifications of relief personnel.
10. When possible have CECC Staff monitor TSC briefings via telephone.



APPENDIX C  
(Page 1 of 1)  
EMERGENCY CLASSIFICATION UPGRADE FORM

1. ☐ NOUE    ☐ ALERT    ☐ SITE AREA EMERGENCY    ☐ GENERAL EMERGENCY

2. Affected Units:    BFN U-2 ☐, U-3 ☐;    SQN U-1 ☐, U-2 ☐;    WBN U-1 ☐

3. EAL Designator: \_\_\_\_\_

4. Event Declared:                      Time: \_\_\_\_\_                      Date: \_\_\_\_\_

5. Protective Action Recommendation

☐ None

☐ CECC Director's Protective Action Recommendation.  
(Attach EPIP-1, Appendix I)

6. Call State and provide this information

	Name	Time State Notified	Date
CECC Director			

7. Please repeat the information you have received to ensure accuracy.

8. Fax this form to the State as soon as possible.

**APPENDIX D  
(Page 1 of 1)**

**CECC DIRECTOR RESPONSIBILITIES FOR NOUE  
WHEN CECC IS STAFFED**

**NOUE**

	Check box when action complete	Action
1	Record Time  -----	Verify that the State or local emergency response agencies have been notified of the emergency classification. If not, provide verbal notification to the appropriate State Agency of any emergency classification within 15 minutes of its declaration by the SED.  Fax Appendix C to the State as soon as possible.
2	<input type="checkbox"/>	Verify that the time of the State notification has been provided to the to the SED.
3	<input type="checkbox"/>	Approve State Update Form (as prepared by State Communicator).
4	<input type="checkbox"/>	Coordinate with Public Information concerning activities related to the event.
5	<input type="checkbox"/>	Establish staffing requirements for the CECC for response to the NOUE.
6	<input type="checkbox"/>	When the event terminates refer to checklist (see EPIP-13)

Completed by	Name:	Date:
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**APPENDIX E  
(Page 1 of 1)**

**CECC DIRECTOR RESPONSIBILITIES FOR ALERT**

**ALERT**

	Check box when action complete	Action
1	<input type="checkbox"/>	Record classification change information on Appendix C, Emergency Classification Upgrade Form if CECC is staffed when the event is declared.
2	Record Time  -----	Provide verbal notification to the appropriate State Agency of any emergency classification upgrade within 15 minutes of its declaration by the SED  Fax Appendix C to the State as soon as possible.
3	<input type="checkbox"/>	Conduct CECC briefing.
4	<input type="checkbox"/>	Notify the SED of the time that the State or local emergency response agencies was notified of the emergency classification upgrade.
5	<input type="checkbox"/>	Approve State Update Form (as prepared by State Communicator).
6	<input type="checkbox"/>	Coordinate Public Information activities. If activation of JIC is required complete steps 7 and 8 below.
7	<input type="checkbox"/>	Coordinate staffing of the JIC with Public Information and State per EPIP-14.
8	<input type="checkbox"/>	Identify TVAN spokesperson (CECC Director, Site Vice President, or Site Emergency Director) and place on standby for JIC activation. Use Appendix M to document FFD.
9	<input type="checkbox"/>	Approve any CECC News Releases.
10	<input type="checkbox"/>	Evaluate assigning TVA Liaison to State EOC (Coordinate with EP Staff).
11	<input type="checkbox"/>	Obtain Site Accountability status:  Time Accountability initiated: _____ Time Accountability competed: _____  All personnel accounted for: <input type="checkbox"/> yes <input type="checkbox"/> no
12	<input type="checkbox"/>	When the event terminates refer to checklist (see EPIP-13)

**Completed by**

**Name:**

**Date:**

**APPENDIX F  
(Page 1 of 1)  
CECC DIRECTOR RESPONSIBILITIES  
FOR SITE AREA EMERGENCY**

**SITE AREA  
EMERGENCY**

	Check box when action complete	Action
1	<input type="checkbox"/>	Record classification change information on Appendix C, Emergency Classification Upgrade Form if CECC is staffed when the event is declared.
2	Record Time  -----	Provide verbal notification to the appropriate State Agency of any emergency classification upgrade within 15 minutes of its declaration by the SED  Fax Appendix C to the State as soon as possible.
3	<input type="checkbox"/>	Notify the SED of the time that the State or local emergency response agencies was notified of the emergency classification upgrade.
4	<input type="checkbox"/>	Announce classification to the CECC and inform TVA Spokesperson (if JIC staffed).
5	<input type="checkbox"/>	Approve State Update Form (as prepared by State Communicator).
6	<input type="checkbox"/>	Coordinate staffing of the JIC with Public Information and State per EPIP-14.
7	<input type="checkbox"/>	Assign TVA Liaison to State EOC (Coordinate with EP Staff).
8	<input type="checkbox"/>	Periodically review PARs with Plant and Rad Assessment Teams in the event of upgrading to a General Emergency. Appendix H provides a logic diagram to assist in development of PARs.
9	<input type="checkbox"/>	Approve any CECC news release.
10	<input type="checkbox"/>	Assign the Radiological Assessment Manager to contact the TPS Transmission Dispatcher (via the ODS) to coordinate protective measures necessary for any TPS crews within the 10-mile EPZ.
11	<input type="checkbox"/>	Assign TVAN spokesperson (CECC Director, Site Vice President, or Site Emergency Director). Use Appendix M to document FFD.
12	<input type="checkbox"/>	Obtain Site Accountability status:  Time Accountability initiated: _____ Time Accountability competed: _____  All personnel accounted for: <input type="checkbox"/> yes <input type="checkbox"/> no
13		Provide the State Director with an estimated time for evacuation of non-essential site personnel: Time State Director notified: _____ Time evacuation initiated: _____ Time Evacuation completed: _____
14	<input type="checkbox"/>	When the event terminates refer to checklist (see EPIP-13)

Completed by	Name:	Date:
--------------	-------	-------

APPENDIX G  
(Page 1 of 2)  
CECC DIRECTOR RESPONSIBILITIES  
FOR CECC GENERAL EMERGENCYGENERAL  
EMERGENCY

	Check box when action complete	Action
1	<input type="checkbox"/>	Record classification change information on Appendix C, Emergency Classification Upgrade Form if CECC is staffed when the event is declared.
2	<input type="checkbox"/>	Review PARs with Plant and Rad Assessment teams and complete PAR Appendix I. (Appendix H provides a logic diagram to assist in development of PARs.)
3	Record Time  -----	Provide verbal notification to the appropriate State Agency of the emergency classification upgrade and PAR within 15 minutes after its declaration by the SED.  Fax Appendixes C and I (PAR) to the State as soon as possible.
4	<input type="checkbox"/>	Notify the SED of the time that the State or local emergency response agencies was notified of the emergency classification upgrade.
5	<input type="checkbox"/>	Announce classification to the CECC and inform TVA Spokesperson (when JIC staffed).
6	<input type="checkbox"/>	Approve State Update Form (as prepared by State Communicator) with hard copy of PAR Recommendation (Appendix I) attached.
7	<input type="checkbox"/>	Assign the RAM to contact the TPS Transmission Dispatcher (via the ODS) to coordinate protective measures necessary for any TPS crews within the 10-mile EPZ.
8	<input type="checkbox"/>	Approve any CECC news release.
9	<input type="checkbox"/>	Coordinate staffing of the JIC with Public Information and State per EPIP-14.
10	<input type="checkbox"/>	Assign TVAN spokesperson (CECC Director, Site Vice President, or Site Emergency Director). Use Appendix M to document FFD.
11		Coordinate with the JIC Spokesperson times of anticipated JIC briefings and provide status updates prior to the JIC briefings. Record time of updates in log.
12	<input type="checkbox"/>	Assign TVA Liaison to State EOC (Coordinate with EP Staff). Use Appendix M to document FFD.
13		Obtain Site Accountability status:  Time Accountability initiated: _____ Time Accountability competed: _____  All personnel accounted for: <input type="checkbox"/> yes <input type="checkbox"/> no
14		Provide the State Director with an estimated time for evacuation of non-essential site personnel: Time State Director notified: _____ Time evacuation initiated: _____ Time Evacuation completed: _____
15	<input type="checkbox"/>	When the event terminates refer to checklist (see EPIP-13)

Completed by

Name:

Date:

APPENDIX G  
(Page 2 of 2)  
CECC DIRECTOR RESPONSIBILITIES  
FOR GENERAL EMERGENCY

<b>PAR CHANGE</b>
-----------------------

**IF PAR IS CHANGED**

	Check box when action complete	Action
1	<input type="checkbox"/>	Review PARs with Plant and Rad Assessment teams and complete PAR Appendix I. (Appendix H provides a logic diagram to assist in development of PARs.)
2	Record Time  -----	Provide verbal notification to the appropriate State Agency of PAR change within 15 minutes.  Fax Appendix I to the State as soon as possible.
3	<input type="checkbox"/>	Confer with SED for site actions.
4	<input type="checkbox"/>	Approve any CECC news release.
5	<input type="checkbox"/>	Approve State Update Form (as prepared by State Communicator) ) with hard copy of PAR Recommendation (Appendix I) attached.
6	<input type="checkbox"/>	Direct the RAM to contact the TPS Transmission Dispatcher (via the ODS) to coordinate protective measures necessary for any TPS crews within the 10-mile EPZ.

Completed by	Name:	Date:
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APPENDIX H  
(Page 1 of 1)

PROTECTIVE ACTION RECOMMENDATIONS LOGIC DIAGRAM

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

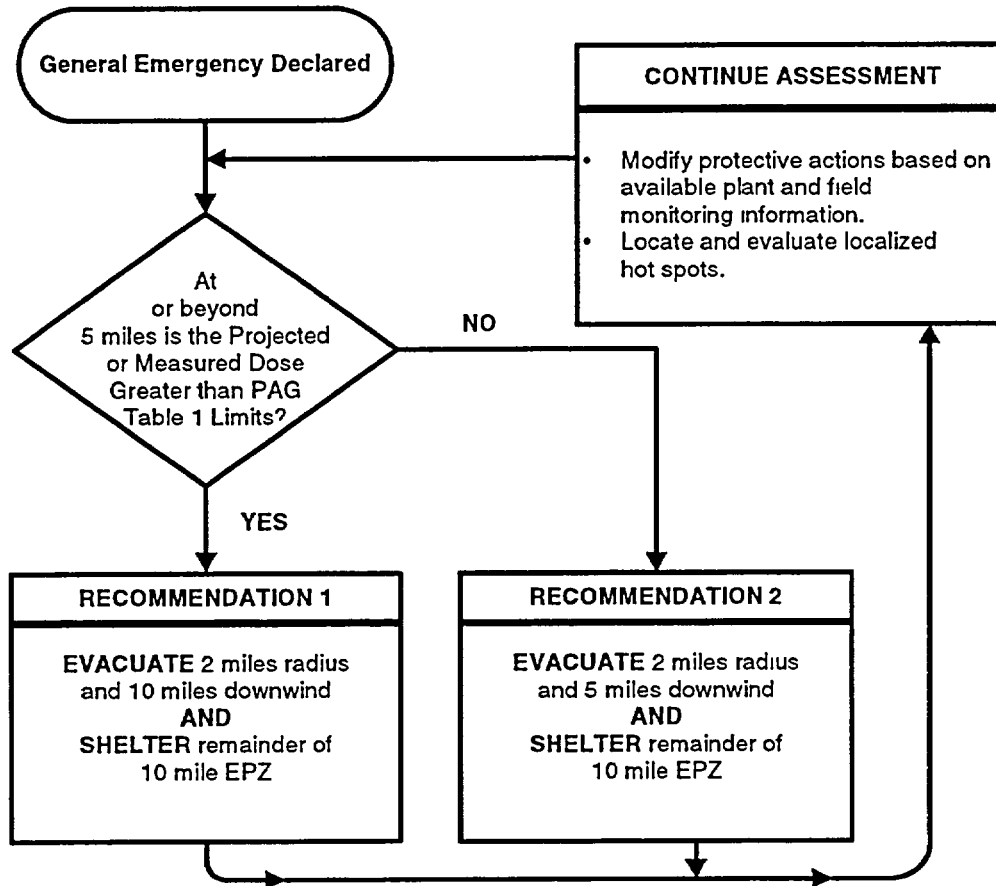


TABLE 1 Protective Action Guides (PAG)	
TYPE	LIMIT
Measured	3.9E-6 microCi/cc of Iodine 131 or 1 REM/hr External Dose
Projected	1 REM TEDE or 5 REM Thyroid CDE

<b>CENTRAL EMERGENCY CONTROL CENTER (CECC) OPERATIONS</b>	<b>CECC EPIP-1</b>	<b>Page 16 of 33 Revision 37</b>
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**APPENDIX I  
(Page 1 of 4)  
CECC Director's Protective Action Recommendation**

TO:    ☐ AEMA, Clanton, AL  
☐ Alabama Radiation Control Agency, Montgomery, AL  
☐ Alabama Radiation Control Agency, Decatur, AL (Director, TVA Liaison & AEMA Rep)  
☐ TEMA, Nashville, TN (SEOC Director, TVA Liaison & Radiological Health)

Plant:    ☐ Browns Ferry                      ☐ Sequoyah                      ☐ Watts Bar

**Recommendation: (Completed by CECC Director)**

PAR #	Action
1	<ul style="list-style-type: none"> <li>▶ Evacuate 2 mile radius and 10 miles downwind</li> <li>▶ Shelter remainder of 10 mile EPZ.</li> </ul>
2	<ul style="list-style-type: none"> <li>▶ Evacuate 2 mile radius and 5 miles downwind</li> <li>▶ Shelter remainder of 10 mile EPZ.</li> </ul>
	▶ Consider issuance of Potassium Iodide (KI) in accordance with the State Plan.
Other	

**Basis:**

<input type="checkbox"/>	Actual or measured radiation readings
<input type="checkbox"/>	Dose projection
<input type="checkbox"/>	Severe core damage
<input type="checkbox"/>	Loss of physical control of the facility

**Affected Sectors: (Completed by Radiological Assessment Staff)**

Sectors identified as affected include the sectors in their entirety. Attach appropriate page of this Appendix for the affected plant.
---

	Approval	Time/Date
Dose Assessor		
RAM		

	Name	Time/Date
CECC Director Approval		
State Notified of PAR		

(Transmit this form to the State as soon as possible after providing verbal recommendation)



**APPENDIX I**  
**Page (2 of 4)**  
**CECC Director's Protective Action Recommendation**

<b>BROWNS FERRY SECTORS</b>
-------------------------------------

**BROWNS FERRY**  
**Affected Sectors (Completed by Radiological Assessment Staff)**

**Provide Protective Action Recommendation:** (Check either 1 or 2, and mark wind direction.)

<input type="checkbox"/> <b>Recommendation 1</b> ► EVACUATE LISTED SECTORS (2 mile Radius & 10 miles downwind) ► SHELTER all non-listed sectors. ► Consider issuance of POTASSIUM IODIDE in accordance with State Plan.	<b>WIND FROM ° (Mark)</b>	<input type="checkbox"/> <b>Recommendation 2</b> ► EVACUATE LISTED SECTORS (2 mile radius & 5 mile downwind) ► SHELTER all other non-listed sectors. ► Consider issuance of POTASSIUM IODIDE in accordance with State Plan.
A-2, B-2, F-2, G-2 E-5, -10, F-5, -10, G-5, -10	4 - 40	A-2, B-2, F-2, G-2 E-5, F-5, G-5
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Other:

	<b>Approval</b>	<b>Time/Date</b>
Dose Assessor		
RAM		

**APPENDIX I**

(Page 3 of 4)

**CECC Director's Protective Action Recommendation**

**SEQUOYAH  
SECTORS**

**SEQUOYAH**

**Affected Sectors (Completed by Radiological Assessment Staff)**

**Provide Protective Action Recommendation:** (Check either 1 or 2, and mark wind direction.)

<input type="checkbox"/> <b>Recommendation 1</b> ► EVACUATE LISTED SECTORS (2 mile Radius and 10 miles downwind) ► SHELTER all other non-listed sectors. ► Consider issuance of POTASSIUM IODIDE in accordance with State Plan.	<b>WIND FROM ° (Mark)</b>	<input type="checkbox"/> <b>Recommendation 2</b> ► EVACUATE LISTED SECTORS (2 mile radius and 5 mile downwind) ► SHELTER all other non-listed sectors. ► Consider issuance of POTASSIUM IODIDE in accordance with State Plan.
A-1, B-1, C-1, D-1 C-2, -6, -7, -8, D-2, -3, -5, -6	12 - 49	A-1, B-1, C-1, D-1, C-2, D-2
A-1, B-1, C-1, D-1 D-2, -3, -4, -5, -6	50 - 70	A-1, B-1, C-1, D-1 D-2
A-1, B-1, C-1, D-1 A-3, -4, D-2, -3, -4, -5	71 - 112	A-1, B-1, C-1, D-1 A-3, D-2
A-1, B-1, C-1, D-1 A-2, -3, -4, -5, -6, D-4	113 - 146	A-1, B-1, C-1, D-1 A-2, A-3
A-1, B-1, C-1, D-1 A-2, -3, -4, -5, -6, B-2	147 - 173	A-1, B-1, C-1, D-1, A-2, A-3, B-2
A-1, B-1, C-1, D-1 A-2, -5, -6, B-2, -3, -4	174 - 214	A-1, B-1, C-1, D-1 A-2, B-2
A-1, B-1, C-1, D-1 B-2, -3, -4, -5, -6, -7, -8	215 - 258	A-1, B-1, C-1, D-1 B-2, B-5
A-1, B-1, C-1, D-1 B-2, -3, -5, -6, -7, -8, C-2, -3, -4, -5, -6	259 - 331	A-1, B-1, C-1, D-1 B-2, B-5, C-2
A-1, B-1, C-1, D-1 B-5, C-2, -3, -4, -5, -6, -7, -8	332 - 11	A-1, B-1, C-1, D-1 B-5, C-2

Other:

	Approval	Time/Date
Dose Assessor		
RAM		

**APPENDIX I**  
 (Page 4 of 4)

**CECC Director's Protective Action Recommendation**

**WATTS BAR**

Affected Sectors (Completed by Radiological Assessment Staff)

**WATTS  
BAR  
SECTORS**

**Provide Protective Action Recommendation:** (Check either 1 or 2, and mark wind direction.)

<input type="checkbox"/> <b>Recommendation 1</b> ► EVACUATE LISTED SECTORS (2 mile Radius and 10 miles downwind) ► SHELTER all other non-listed sectors. ► Consider issuance of POTASSIUM IODIDE in accordance with State Plan.		<b>WIND FROM ° (Mark)</b>	<input type="checkbox"/> <b>Recommendation 2</b> ► EVACUATE LISTED SECTORS (2 mile radius and 5 mile downwind) ► SHELTER all other non-listed sectors. ► Consider issuance of POTASSIUM IODIDE in accordance with State Plan.
A-1, B-1, C-1, D-1 C-7, -9, D-2, -4, -5, -6, -7, -8, -9		26-68	A-1, B-1, C-1, D-1 C-7, D-2, -4, -5
A-1, B-1, C-1, D-1 A-3, -4, D-2, -3, -4, -5, -6, -7, -8, -9		69-110	A-1, B-1, C-1, D-1 A-3, D-2, -4, -5
A-1, B-1, C-1, D-1 A-2, -3, -4, -5, -6, -7, D-2, -3, -5, -6		111-170	A-1, B-1, C-1, D-1 A-2, -3, D-2, -5
A-1, B-1, C-1, D-1 A-2, -3, -5, -6, -7, B-2, -3, -4, -5, C-2		171-230	A-1, B-1, C-1, D-1 A-2, -3, B-2, -4, C-2
A-1, B-1, C-1, D- B-2, -3, -4, -5, C-2, -3		231-270	A-1, B-1, C-1, D- B-2, -4, C-2
A-1, B-1, C-1, D- B-2, -3, C-2, -3, -4, -5, -6, -11		271-325	A-1, B-1, C-1, D-1 B-2, C-2, -4, -5
A-1, B-1, C-1, D-1 C-2, -4, -5, -6, -7, -8, -9, -10, -11, D-4, -9		326-25	A-1, B-1, C-1, D- C-2, -4, -5, -7, -8, D-4

Other:

	Approval	Time/Date
Dose Assessor		
RAM		

CENTRAL EMERGENCY, CONTROL CENTER (CECC) OPERATIONS	CECC EPIP-1	Page 20 of 33 Revision 37
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APPENDIX J  
(Page 1 of 4)  
STATE COMMUNICATOR CHECKLIST

CECC ACTIVATION

	Check box when action complete	Action
1	<input type="checkbox"/>	Verify with the CECC Director that initial communication has been established with the appropriate State Agency (SQN & WBN - TEMA; BFN - Alabama Radiation Control, see REND).
2	<input type="checkbox"/>	If the decision is made to activate the TEMA Forward Control Center/Radiological Monitoring Control Center (FCC/RMCC) or Alabama State Radiological Monitoring and Assessment Center (SRMAC) the CECC State Communicator will activate suspended rate telephones in accordance with Appendix N.
3	<input type="checkbox"/>	Coordinate the completion of the staffing report with the Switchboard Operator and send to State when CECC becomes operational.
4	<input type="checkbox"/>	Initiate first State Update Form.
5	<input type="checkbox"/>	Coordinate with the CECC Director to identify the TVA Liaison to the State.

Completed by	Name:	Date:
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NOUE

UNUSUAL EVENT

	Check box when action complete	Action
1	<input type="checkbox"/>	Verify that the State is notified within 15 minutes of the classification declaration.
2	<input type="checkbox"/>	Refer to duties under "General Operations" (page 4 of 4).

Completed by	Name:	Date:
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APPENDIX J  
(Page 2 of 4)  
STATE COMMUNICATOR CHECKLIST

ALERT

ALERT

	Check box when action complete	Action
1	<input type="checkbox"/>	Verify that the State is notified within 15 minutes of the classification declaration
2	<input type="checkbox"/>	Verify Appendix C has been faxed to the State.
3	<input type="checkbox"/>	Notify the TVA Liaison of the change in conditions (if staffed).
4	<input type="checkbox"/>	Refer to duties under "General Operations" (page 4 of 4).

Completed by	Name:	Date:
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SITE  
AREA  
EMERGENCY

SITE AREA EMERGENCY

	Check box when action complete	Action
1	<input type="checkbox"/>	Verify that the State is notified within 15 minutes of the classification declaration.
2	<input type="checkbox"/>	Verify Appendix C has been faxed to the State.
3	<input type="checkbox"/>	Notify the TVA Liaison of the change in conditions (if staffed).
4	<input type="checkbox"/>	Refer to duties under "General Operations" (page 4 of 4).

Completed by	Name:	Date:
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APPENDIX J  
(Page 3 of 4)  
STATE COMMUNICATOR CHECKLIST

GENERAL  
EMERGENCY

GENERAL EMERGENCY

	Check box when action complete	Action
1	<input type="checkbox"/>	Verify that the State is notified within 15 minutes of the classification declaration or PAR.
2	<input type="checkbox"/>	Verify Appendixes C and I have been faxed to the State.
3	<input type="checkbox"/>	Notify the TVA Liaison of the change in conditions (if staffed).
4	<input type="checkbox"/>	Refer to duties under "General Operations" (page 4 of 4).

Completed by	Name:	Date:
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UPDATED  
PAR

UPDATED PAR

	Check box when action complete	Action
1	<input type="checkbox"/>	Verify that the State is notified within 15 minutes of the PAR declaration.
2	<input type="checkbox"/>	Verify Appendix I has been faxed to the State.
3	<input type="checkbox"/>	Notify the TVA Liaison of the change in conditions (if staffed).

Completed by	Name:	Date:
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CENTRAL EMERGENCY CONTROL CENTER (CECC) OPERATIONS	CECC EPIP-1	Page 23 of 33 Revision 37
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APPENDIX J  
(Page 4 of 4)  
STATE COMMUNICATOR CHECKLIST

**GENERAL OPERATIONS**

1. Complete page 1 of CECC-EPIP-1, Appendix K, and send to State at least hourly. Note in position log.
2. Verify that Dose Assessment is sending (via computer or telecopy) pages 2 and 3 of Appendix K to their counterparts at least hourly. Note in position log.
3. Acts as contact for the State to clarify any discrepancies between information supplied from the CECC and any other TVA or non-TVA organization as they pertain to TVA-related activities.
4. Responsible for ensuring pertinent information related to emergency classifications, PARs, plant status, onsite responses, and TVA's dose/environs assessment activities are being provided to the State.
5. Assists the State as requested in providing TVA resource assistance to the State.
6. Assists the State Liaison (State government representative) as necessary to keep him briefed on the plan situation and coordinating responses to State inquiries, etc.
7. Acts as contact for the State to clarify any discrepancies between information supplied from the CECC and any other TVA or non-TVA organization as they pertain to TVA-related activities.
8. Maintain an awareness of key State activities and provide report in CECC briefings (until arrival of State Liaison to the CECC).

APPENDIX K  
(Page 1 of 3)  
STATE UPDATE FORM

Message  
Number  
\_\_\_\_\_

TO: ☐ AEMA, Clanton, AL  
☐ Alabama Radiation Control Agency, Montgomery, AL  
☐ Alabama Radiation Control Agency, Decatur, AL (Director, TVA Liaison & AEMA Rep)  
☐ TEMA, Nashville, TN (SEOC Director, TVA Liaison & Radiological Health)

FROM: CECC State Communicator at (423) 751-1613

REASON FOR REPORT: ☐ Periodic ☐ Significant Change of Status (min. items 1-5)

1. Affected Units: BFN U-2 ☐, U-3 ☐; SQN U-1 ☐, U-2 ☐; WBN U-1 ☐
2. Emergency Classification: ☐ NOUE ☐ Alert ☐ Site Area Emergency ☐ General Emergency  
EAL Designator: \_\_\_\_\_ Declared at: \_\_\_\_\_ (local time at site), on: \_\_\_\_\_ (date)
3. Protective Action Recommendation ☐ None ☐ No change in existing PAR  
☐ CECC Director's Protective Action Recommendation. (Attach EPIP-1, Appendix I)
4. Offsite dose projections are: ☐ N/A ☐ Stable ☐ Improving ☐ Deteriorating
5. Radiological Release: ☐ No Abnormal ☐ Projected ☐ Actual

Estimated duration or Impact Times	<input type="checkbox"/> Airborne (see p. 2 of 3) <sup>1</sup>	<input type="checkbox"/> Waterborne (see p. 3 of 3) <sup>1</sup>	<input type="checkbox"/> Surface Spill
---------------------------------------	---	---	--

<sup>1</sup> May be generated and transmitted by computer

Estimate of surface spill contamination: \_\_\_\_\_

6. Actions to reduce/terminate radioactive release: \_\_\_\_\_
7. Emergency Actions underway at plant site:  
☐ Site Accountability: Initiated (time) \_\_\_\_\_ Completed (time) \_\_\_\_\_  
☐ Non-essential personnel released from site (time) \_\_\_\_\_  
☐ Other: \_\_\_\_\_
8. Onsite support needed or requested from State/local organizations: \_\_\_\_\_
9. Plant conditions: See CECC EPIP-6, PLANT SYSTEMS ASSESSMENT Appendix - Time of Assessment: \_\_\_\_\_

Approval	Name	Time	Date
CECC Director			



APPENDIX K  
(Page 2 of 3)  
STATE UPDATE FORM

PROJECTED AIRBORNE RELEASES  
RADIOLOGICAL DOSE ASSESSMENT - PERIODIC STATE INFORMATION

Time: \_\_\_\_\_ (local)

15. The release being assessed began/begins at \_\_\_\_\_ local time and is estimated to continue for \_\_\_\_\_ hr.

16. Release Rate: Noble Gas \_\_\_\_\_  $\mu\text{Ci/s}$   
Iodine-131 \_\_\_\_\_  $\mu\text{Ci/s}$   
Particulates \_\_\_\_\_  $\mu\text{Ci/s}$   
Gross Activity \_\_\_\_\_  $\mu\text{Ci/s}$

17. Release Path: \_\_\_\_\_ Effective Release Height \_\_\_\_\_ m  
(0 meters = ground level)

18. Meteorological Conditions: Wind Speed: \_\_\_\_\_ meters/sec  
\_\_\_\_\_ miles/hr

Wind Direction  
(From) \_\_\_\_\_ (degrees/sector)

Stability Class \_\_\_\_\_  
Precipitation \_\_\_\_\_ mm  
Affected Sector \_\_\_\_\_ degrees/sector

19. Projected Doses (rem) (Does not include previously received dose)

<u>Distance</u>	<u>TEDE</u>	<u>Thyroid CDE</u>	<u>Cow Milk</u>
0.62 mi	_____	_____	_____
2 mi	_____	_____	_____
5 mi	_____	_____	_____
10 mi	_____	_____	_____

20. Comments

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

**APPENDIX K**  
**(Page 3 of 3)**  
**STATE UPDATE FORM**

**ACTUAL/PROJECTED LIQUID RELEASES**  
**RADIOLOGICAL DOSE ASSESSMENT - PERIODIC STATE INFORMATION**

21. Time: \_\_\_\_\_ (local)
22. The release being assessed began/begins at \_\_\_\_\_ local time and is estimated to continue for \_\_\_\_\_ hr.
23. Release:                      Nuclide                      Concentration
- |  |  |        |
|--|--|--------|
|  |  | μCi/mL |
|  |  | μCi/mL |
|  |  | μCi/mL |
|  |  | μCi/mL |
|  |  | μCi/mL |
24. Release Point:              ☐ Shoreline                      ☐ Diffuser
25. Total Release Volume: \_\_\_\_\_ ft<sup>3</sup> (1 gallon = 0.134 ft<sup>3</sup>)
26. RIVER FLOW at the plant \_\_\_\_\_ ft<sup>3</sup>/s
27. DOWNSTREAM MAXIMUM ORGAN DOSE RATE TO HYPOTHETICAL INDIVIDUAL ON THE SHORELINE DUE TO DRINKING THE WATER

LOCATION (TRM)	ARRIVAL TIME (DAY)	CONCENTRATION (microCi/mL)		DOSE RATE (D) (rem/d)	
		Plant Side	Opposite Side	Plant Side	Opposite Side

28. COMMENTS: \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

APPENDIX L  
(Page 1 of 1)  
MANAGEMENT SERVICES SUPERVISOR CHECKLIST

	Check box when action complete	Action
1	<input type="checkbox"/>	Contact clerical personnel to staff CECC positions as listed in the Management Services Supervisor position notebook. Use Appendix M to document FFD.
2	<input type="checkbox"/>	If RMCC is being staffed contact clerical support for that location. Use Appendix M to document FFD. List positions.
3	<input type="checkbox"/>	If JIC is being staffed contact clerical support for that location. Use Appendix M to document FFD. List positions.
4	<input type="checkbox"/>	Set emergency classification and site inputs on electronic clocks (see workbook for details).
5	<input type="checkbox"/>	Brief clerical staff on roles and responsibilities.

Completed by	Name:	Date:
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**GENERAL OPERATIONS**

1. Monitor and allocate CECC clerical personnel where needed (avoid fax backlogs, etc.).
2. Obtains needed documents and drawings from DCRM.
3. Updates Emergency Classification on electronic clocks.
4. Coordinates meals and lodging.
5. Maintains position log.
6. Schedules relief for clerical positions.

APPENDIX M  
Page 1 of 1

FITNESS FOR DUTY  
PROGRAM ADMINISTRATION

TVA NUCLEAR  
CALL-IN SHEET

Person Calling: \_\_\_\_\_

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

Name	Time Called	Time Needed to Report	Alcohol 5 Hrs. Prior to Report (Y/N)	Fit for Duty (Y/N)	Duty Official Comments

**APPENDIX N**  
(Page 1 of 5)

**ACTIVATION AND DEACTIVATION OF SUSPENDED RATE TELEPHONE LINES  
IN TVA AND STATE EMERGENCY FACILITIES**

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

TIME/INITIAL

Activation

\_\_\_\_\_/

Notify TVA Information Technical Service Center (ITSC) at (423) 751-4357 and request suspended rate lines in the facilities identified for activation be removed from suspended rate status. Refer to attachment for identified facility to be activated and request ITSC implement their procedure to activate suspended rate telephone lines.

**Browns Ferry JIC - Refer to Section 1.0 of this Appendix.**

**Browns Ferry SRMAC/AEMA Liaison - Refer to Section 2.0 of this Appendix.**

**Sequoyah/Watts Bar JIC - Refer to Section 3.0 of this Appendix.**

**Sequoyah FCC/RMCC - Refer to Section 4.0 of this Appendix.**

Follow instructions in the applicable attachment to return lines to suspended rate status.

\_\_\_\_\_/

TVA ITSC confirmed action has been completed to remove lines from suspended rate status.

Deactivation

\_\_\_\_\_/

ITSC and Telecommunications Support Services contacted at (423) 751-2228 to request the telephone lines be placed back in suspended rate status.

\_\_\_\_\_/

Notify Manager, Emergency Preparedness, State and Local Programs to follow up on request to return lines to suspended rate status.

**APPENDIX N  
(Page 2 of 5)**

**1.0 ACTIVATION/DEACTIVATION REQUIREMENTS FOR BROWNS FERRY JIC**

- a. All telephones in the assigned rooms of the Fine Arts Building of John C. Calhoun State Community College must be removed from suspended rate status when the decision is made to staff the JIC.
- b. To activate the telephone lines on suspended rates, the EDO/State Communicator will contact the TVA Information Technical Service Center (ITSC) at (751-4357) and request the following lines be activated by using the lead telephone numbers to activate the blocks of lines.

**BFN LEAD TELEPHONE NUMBERS (EARNING NUMBERS): 256-340-0092 & 256-355-4823**

After the above is requested, the following lines will be activated:

LEAD NUMBER FOR THE SEVEN AREAS OF JIC IMMEDIATELY FOLLOWING: 256-340-0092. This lead number activates these 54 phones.

TVA Staff Room (19 phones)	256-350-0092	256-350-5942	256-355-7643	256-355-2783
	256-350-5943	256-355-2782	256-350-5956	256-350-5957
	256-355-8073	256-340-0096	256-350-5953	256-355-8041
	256-355-8055	256-350-6089	256-350-5952	256-350-3895
	256-353-8347	256-340-0093	256-340-0094	
NRC/FEMA Staff Room (4 phones)	256-355-8002	256-353-1033		
	256-350-3893	256-353-1049		
AEMA Workroom (21 phones)	256-355-8036	256-350-5958	256-355-0730	256-355-8012
	256-350-6128	256-350-6129	256-355-0713	256-355-0714
	256-355-0705	256-353-6124	256-353-1059	256-350-6126
	256-350-6127	256-350-6120	256-350-6125	256-350-6122
	256-350-6123	256-350-6121	256-350-5944	256-350-3894
	256-350-5951			
Media Monitoring Broadcast Space (3 phones)	256-355-7644	256-350-6481	256-355-8043 (Trouble Shooting)	
Media Work Space First Floor (5 phones)	256-355-4858	256-355-7916	256-355-4824	256-355-4828
JIC Security (1 phone)	256-350-5941			
Update Desk (1 phone)	256-355-2712			

LEAD NUMBER FOR THE AREA OF JIC IMMEDIATELY FOLLOWING: 256-355-4823.  
This lead number activates these 15 phones.

Media Work Space Second Floor (15 phones)	256-355-4823	256-355-4829	256-355-4941	256-355-4942
	256-355-4943	256-355-4944	256-355-4951	256-355-4952
	256-355-4953	256-355-4954	256-355-4998	256-355-7701
	256-355-7702	256-355-7913	256-355-7914	

**APPENDIX N  
(Page 3 of 5)**

- c. The ITSC will contact the EDO/State Communicator and confirm action has been completed to remove lines from suspended rate status.
- d. When the JIC is deactivated, the EDO/State Communicator will contact ITSC and Telecommunications Support Services at 751-2228 and request the above listed numbers be placed back in suspended rate status. The EDO/State Communicator will then request that the Manager, Emergency Preparedness, State and Local Programs follow up this request within 5 days and confirm this action has been completed.

**2.0                    ACTIVATION/DEACTIVATION REQUIREMENTS FOR STATE SRMAC FOR  
BROWNS FERRY**

- a. There are a limited number of suspended rate telephone lines in the State RMCC for Browns Ferry. These lines are located in the basement of the SRMAC/FCC portion of the Morgan County Emergency Operations Center in the basement of the Morgan County Courthouse. These lines must be removed from suspended rate status when the Director of the State Radiation Control Agency determines the RMCC is to be staffed in order to direct the activities of the field monitoring teams.
- b. To activate the telephone lines on suspended rates, the EDO/State Communicator will contact the TVA Information Technical Service Center (ITSC) at 751-4357 and request the following lines be activated using the lead telephone number.

**LEAD TELEPHONE NUMBER (EARNING NUMBER): 256-350-9362**

After the above is requested, the following lines will be activated:

Rm. B-31	256-350-9362			
Rm. B-33	256-355-9520	256-355-9076	256-350-6580	256-351-6024
	256-355-9158	256-351-0441	256-301-8931	

- c. The ITSC Center will contact the EDO/State Communicator and confirm action has been completed to remove lines from suspended rate status.
- d. When the SRMAC is deactivated, the EDO/State Communicator will contact ITSC and Telecommunications Support Services at 751-2228 and request the above listed numbers be placed back in suspended rate status. The EDO/State Communicator will then request that the Manager, Emergency Preparedness, State and Local Programs follow up this request within 5 days and confirm this action has been completed.

APPENDIX N  
(Page 4 of 5)

3.0 ACTIVATION/DEACTIVATION REQUIREMENTS FOR SEQUOYAH/WATTS BAR JIC

- a. There are 20 telephone lines in the Sequoyah/Watts Bar JIC that are on suspended rate status. These lines are assigned to the Media Work area which is located in the hallway outside of the basement auditorium in Missionary Ridge Place in the Chattanooga Office Complex. These lines must be removed from suspended rate status when the decision is made to staff the JIC.
- b. To activate telephone lines on suspended rates, the EDO/State Communicator will contact the TVA Information Technical Service Center (ITSC) at 751-4357 and request the following lines be activated using the lead telephone numbers.

LEAD TELEPHONE NUMBERS (EARNING NUMBERS): 423-265-0300 & 423-265-0333

After the above is requested the following lines will be activated:

Media Work Area:	423-265-0300	423-265-0312	423-265-0314	423-265-0319
Lead Number (Basic 5)	423-265-0325			
Lead Number (Additional 15)	423-265-0333	423-265-0336	423-265-0345	423-265-0350
	423-265-0370	423-265-0400	423-265-0401	423-265-0418
	423-265-0611	423-265-0613	423-265-0642	423-265-0645
	423-265-0650	423-265-0652	423-265-0655	

- c. The ITSC will contact the EDO/State Communicator and confirm action has been completed to remove lines from suspended rate status.
- d. When the JIC is deactivated, the EDO/State Communicator will contact the ITSC and Telecommunications Support Services at 751-2228 and request the above listed numbers be placed back in suspended rate status. The EDO/State Communicator will then request that the Manager, Emergency Preparedness, State and Local Programs follow up this request within 5 days and confirm this action has been completed.



**APPENDIX N  
(Page 5 of 5)**

**4.0 ACTIVATION/DEACTIVATION REQUIREMENTS FOR STATE FCC/RMCC FOR  
SEQUOYAH/WATTS BAR**

- a. All telephone lines in the State FCC/RMCC located in the Air National Guard Armory at Lovell Field in Chattanooga must be removed from suspended rate status when the Tennessee Emergency Management Agency makes the decision to staff that facility.
- b. To activate the telephone lines on suspended rates, the EDO/State Communicator will contact the Information Technical Service Center (ITSC) at 751-4357 and request the following lines be activated using the lead telephone numbers to activate the blocks of lines.

**LEAD TELEPHONE NUMBER (EARNING NUMBER): 423-899-9858**

After the above is requested, the following lines will be activated:

RMCC (5 lines)	423-899-9858	423-894-6843	423-855-0190	423-899-7086	423-855-3765
FCC (21 lines)	423-899-9433	423-894-6799	423-899-6795	423-899-9374	
	423-899-9623	423-899-9621	423-899-9023	423-899-9129	
	423-899-0826	423-899-9709	423-899-9389	423-899-9279	
	423-899-6595	423-899-9599	423-899-9071	423-899-9771	
	423-899-6980	423-899-6982	423-899-9025	423-899-9597	
	423-855-3768				

- c. The ITSC will contact the EDO/State Communicator and confirm that action has been completed to remove the lines from suspended rate status.
- d. When the FCC/RMCC is deactivated, the EDO/State Communicator will contact the ITSC and Telecommunications Support Services at 751-2228 and request the above listed numbers be placed back in suspended rate status. The EDO/State Communicator will then request that the Manager, Emergency Preparedness, State and Local Programs follow up this request within 5 days and confirm this action has been completed.

Tennessee Valley Authority	Title	CECC EPIP-2 REV. 30										
		Effective Date: <u>3/31/03</u>										
CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN IMPLEMENTING PROCEDURES	OPERATIONS DUTY SPECIALIST PROCEDURE FOR NOTIFICATION OF UNUSUAL EVENT											
<p>WRITTEN BY: <u><i>J Thomas E. Caddin</i></u>      REVIEWED BY: <u><i>A Mah</i></u>      <u><i>3/24/2003</i></u> Signature    Signature    Date</p> <p>PLAN EFFECTIVENESS DETERMINATION: <u><i>J Thomas E. Caddin</i></u>      <u><i>3/24/03</i></u> Signature    Date</p> <p style="text-align: center;"><b>CONCURRENCES</b></p> <table border="1"> <thead> <tr> <th>Concurrence Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <i>David Pond</i></td> <td><u><i>3/25/2003</i></u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Emergency Preparedness <i>BPM</i></td> <td><u><i>3/25/03</i></u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandrasekhar</i></td> <td><u><i>3/27/03</i></u></td> </tr> <tr> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>			Concurrence Signature	Date	<input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <i>David Pond</i>	<u><i>3/25/2003</i></u>	<input checked="" type="checkbox"/> Manager, Emergency Preparedness <i>BPM</i>	<u><i>3/25/03</i></u>	<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandrasekhar</i>	<u><i>3/27/03</i></u>	<input type="checkbox"/>	
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<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandrasekhar</i>	<u><i>3/27/03</i></u>											
<input type="checkbox"/>												

APPROVED BY: Markus Burzynski Vice President, E&TS  
Signature Title Organization 3/27/03  
Date

CECC-EPIP-2  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR NOTIFICATION OF UNUSUAL EVENT

Rev. No.	Date	REVISION LOG	
			Revised Pages
0	3/22/88	All (Changed from IPD to EPIP)	
1	4/27/88	3	
2	11/18/88	3	
3	4/26/89	All	
4	7/13/89	3	
5	9/19/89	All	
6	10/26/89	1,2, App. A (pg.2), App. B (p.2)	
7	5/23/90	App. A (p.2), App. B (p.2)	
8	5/21/91	Page 2 of 2, App. A, Pgs. 1 and 2, App. B, Pgs. 1 and 2	
9	5/31/91	Page 2 of 2; App. B, Pgs. 1 and 2	
10	12/12/91	Pages 1-2; App. A, pgs. 1-2; App. B, Pgs. 1-2	
11	12/23/92	New coversheet and rev log added; pgs. 1-3; App. A, Appendix B deleted	
12	06/18/93	Page 3; all pages issued.	
13	06/28/94	All	
14	2/17/95	Page 3 Name removal from notification list	
15	7/13/95	Page 3 change Al. Area code; All pages issued.	
16	3/20/96	Page 3 change M. O. Medford to J. P. Maciejewski; all pages issued.	
17	10/30/96	Change SOS to SM, add SNE to call list, add M. O. Medford to call list, correct telephone area code.	
18	12/12/96	Page 3 change M. O. Medford to O. J. Zeringue; all pages issued.	
19	4/7/97	Annual review. Add notification completed step to procedure. All pages issued	
20	7/16/97	Modify notification list. All pages issued.	
21	9/24/98	Add Mr. Scalice to notification list and remove Mr. Zeringue. All pages issued.	

CECC-EPIP-2  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR NOTIFICATION OF UNUSUAL EVENT

Rev. No.	Date	REVISION LOG (Continued) Revised Pages
<u>22</u>	<u>11/13/00</u>	<u>Add Public Information Manager to OPS notification list. Remove reference to notification board.</u>
<u>23</u>	<u>3/30/01</u>	<u>Annual review. Revise initial State Notification Form. All pages issued.</u>
<u>24</u>	<u>8/23/01</u>	<u>Update notification list. All pages issued.</u>
<u>25</u>	<u>11/7/01</u>	<u>Update notification list. All pages issued.</u>
<u>26</u>	<u>6/13/02</u>	<u>Annual review, add TPS notification, add credible threat NOUE activation of CECC, update notification list, add time to Initial State Notification Form. All pages issued.</u>
<u>27</u>	<u>7/24/02</u>	<u>Change "credible threat" terminology and update notification list. All pages issued.</u>
<u>28</u>	<u>9/3/02</u>	<u>Update organization names. Add Load Coordinator and TPS Transmission Dispatcher phone numbers.</u>
<u>29</u>	<u>10/30/02</u>	<u>Remove statement to activate CECC at a credible threat EAL. Move the procedure step for the ODS to notify the SED of the State notification of the event to a point earlier in the procedure.</u>
<u>30</u>	<u>3/31/03</u>	<u>Annual review, new release terminology added to Initial Notification Form. All pages issued.</u>

**OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR NOTIFICATION OF UNUSUAL EVENT**

**1.0 PURPOSE**

This procedure is designed to direct the ODS during a Notification of Unusual Event to ensure consistent, accurate, and timely response in the event of an emergency.

**2.0 SCOPE**

This procedure covers anticipated requirements of the ODS during a Notification of Unusual Event.

**3.0 REFERENCES**

Radiological Emergency Plan

**4.0 ABBREVIATIONS AND DEFINITIONS**

EDO - Emergency Duty Officer  
ODS - Operations Duty Specialist  
CECC - Central Emergency Control Center  
NP - Nuclear Power  
SNE - Senior Nuclear Executive

**5.0 RESPONSIBILITIES**

- 5.1 Upon notification by the Site Emergency Director that a Notification of Unusual Event exists, the ODS is responsible for recording the preliminary report of information concerning the incident on Appendix A.
- 5.2 The ODS is responsible for notifying the appropriate State agency, CECC EDO, key NP emergency response personnel, the Load Coordinator, and the TPS Transmission Dispatcher.
- 5.3 The ODS is responsible for recording any follow-up information on Appendix B and notifying the appropriate State, CECC EDO, and CECC Director.
- \*

\*Revision

6.0 PROCEDURE REQUIREMENTS

6.1 Actions to be Taken for a Notification of Unusual Event

The ODS performs the following tasks.

NOTE: When making notifications of an emergency situation, provide only the information contained on the attachment. Avoid any unnecessary explanation or elaboration of the information. Timeliness and accuracy is of the utmost importance. If additional information/explanation is required by any party, provide the name and phone number of the EDO and request they contact him or patch them through to him.

(TIME/INITIALS)

\_\_\_\_ / \_\_\_\_ 6.1.1 Upon receiving a call from the Site Emergency Director:

Turn on Recording Equipment and enter the following information.

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

Current Time: \_\_\_\_\_

\_\_\_\_ / \_\_\_\_ 6.1 2 Refer to the form in Appendix A and log information to be provided to the State.

6.1.3 Make notification call to the appropriate State (not to exceed 15 minutes from the time of the declaration of the event).

Tennessee

TEMA Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_  
(Use the ringdown telephone as the primary means to contact TEMA. If this does not work, then use numbers programmed on phones.)

Alabama

Alabama Office of Radiation Control Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_

AFTER HOURS NOTIFY

Montgomery State Trooper Post to have the Office of Radiation Control Duty Officer

call the ODS \_\_\_\_\_ Time: \_\_\_\_\_  
(See numbers programmed on phones )

(TIME/INITIALS)

\_\_\_\_ / \_\_\_\_ 6.1.4 Inform the Site Emergency Director that the respective State has been notified.

6.1.5 Notify the following by phone or pager.

\_\_\_\_ / \_\_\_\_ CECC EDO (See REPTRACK Duty List)

\_\_\_\_ / \_\_\_\_ CECC Director (See REPTRACK Duty List)

\_\_\_\_ / \_\_\_\_ J. A. Scalice (See REND Call-Out List - SNE)

\_\_\_\_ / \_\_\_\_ J. E. Maddox (See REND Call-Out List - SNE)

\_\_\_\_ / \_\_\_\_ B. K. Marks (See REND Call-Out List - CECC Director)

\_\_\_\_ / \_\_\_\_ SNE (See REPTRACK Duty List or REND Call-Out List - SNE)

\_\_\_\_ / \_\_\_\_ Nuclear Emergency Public Information Duty Officer (See REPTRACK Duty List)

\_\_\_\_ / \_\_\_\_ 6.1.6 Notify the Load Coordinator of the condition (751-7547).

\_\_\_\_ / \_\_\_\_ 6.1.7 Notify the TPS Transmission Dispatcher of the condition.  
BFN: SW Dispatch 751-4203  
SQN: SE Dispatch 751-4208  
WBN: NE Dispatch 751-4204

\_\_\_\_ / \_\_\_\_ 6.1.8 Upon receiving telecopy of the Site Emergency Director event form verify the information recorded on Appendix A of this procedure is correct.

\* \_\_\_\_ / \_\_\_\_ 6.1.9 Telecopy Appendix A of this procedure to the affected State.

AL. Office of Radiation Control (334) 206-5387  
TEMA (615) 242-9635

\_\_\_\_ / \_\_\_\_ 6.1.10 Verify that the telecopy to the State has been received. (Only during normal working hours for AL. Office of Radiation Control.) Use programmed telephone number for the affected State.

\* \_\_\_\_ / \_\_\_\_ 6.1.11 Refer to the form in Appendix B, log follow-up information regarding the event in progress, and provide to the appropriate State, CECC EDO, and CECC Director.

## **6.2 Actions To Be Taken When the Condition Is Terminated**

6.2.1 Upon notification of the termination of the Notification of Unusual Event, the ODS has the responsibility of notifying all parties informed in section 6.1 of this procedure.

\_\_\_\_ / \_\_\_\_ Notifications completed

Exceptions: \_\_\_\_\_  
\_\_\_\_\_

APPENDIX A

Page 1 of 1

TVA INITIAL NOTIFICATION FORM FOR UNUSUAL EVENT

1. ☐ This is a Drill ☐ This is an Actual Event - Repeat - This is an Actual Event

2. This is \_\_\_\_\_, ☐ Browns Ferry  
TVA Operations Duty Specialist ☐ Sequoyah has declared an  
At telephone number (423) 751-1700 ☐ Watts Bar

**UNUSUAL  
EVENT**

affecting: ☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

3. EAL Designator(s): \_\_\_\_\_

4. Brief Description of the Event: \_\_\_\_\_

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

5. Radiological Conditions: (Check one under both Airborne and Liquid column.)

Airborne Releases Offsite

- ☐ Minor releases within federally approved limits<sup>1</sup>  
☐ Releases above federally approved limits<sup>1</sup>  
☐ Release information not known

(<sup>1</sup>Tech Specs)

Liquid Releases Offsite

- ☐ Minor releases within federally approved limits<sup>1</sup>  
☐ Releases above federally approved limits<sup>1</sup>  
☐ Release information not known

(<sup>1</sup>Tech Specs)

6. Event Declared: Time: \_\_\_\_\_ Date: \_\_\_\_\_

7. Provide Protective Action Recommendation: ☐ None

8. Please repeat the information you have received to ensure accuracy.

9. Time and Date this information was provided \_\_\_\_\_ / \_\_\_\_\_

**Action: When completed, telecopy this information.**



APPENDIX B Page 1 of 1

FOLLOW-UP INFORMATION FORM  
NOTIFICATION OF UNUSUAL EVENT

1. "This is a Real Emergency. This is a Real Emergency." ☐  
or  
"This is a Drill. This is a Drill." ☐

2. Time \_\_\_\_\_

3. The following significant changes in Plant Conditions have occurred.

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4. The following significant changes in Radiological Conditions have occurred. \_\_\_\_\_

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

6. Time information provided to State. \_\_\_\_\_

7. Name \_\_\_\_\_ Date \_\_\_\_\_

Note: When completed telecopy this Form to the State.

## CECC EPIP Coversheet

Tennessee Valley Authority  CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN IMPLEMENTING PROCEDURES	Title  OPERATIONS DUTY SPECIALIST PROCEDURE FOR ALERT	CECC EPIP-3 REV. 31  Effective Date: 3/31/03
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WRITTEN BY: Thomas E. Addin Signature      REVIEWED BY: [Signature] Signature      3/24/2003 Date

PLAN EFFECTIVENESS DETERMINATION: Thomas E. Addin Signature      3/24/03 Date

## CONCURRENCES

Concurrence Signature	Date
<input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <u>[Signature]</u>	<u>3/25/2003</u>
<input checked="" type="checkbox"/> Manager, Emergency Preparedness <u>[Signature]</u>	<u>3/25/03</u>
<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <u>[Signature]</u>	<u>3/27/03</u>
<input type="checkbox"/>	<u>                    </u>

## APPROVAL

APPROVED BY: <u>[Signature]</u> Signature	Vice President, E&TS Title      Organization	<u>3/27/03</u> Date
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CECC-EPIP-3  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR ALERT

REVISION LOG

Rev. No.	Date	Revised Pages
0	3/22/88	All (Changed from IPD to EPIP)
1	04/27/88	3
2	11/18/88	3, 4
3	4/26/89	All
4	7/13/89	3, 4
5	9/19/89	All
6	10/26/89	2, App A (p. 2), App. B (p.2) Title changed (pgs. 1-2)
7	5/23/90	"Site Area Emergency" section moved to EPIP-4. App. A (pg2), App. B (p.2). App. C added (p.1)
8	5/21/91	Pages 2 and 3, App. A, Pgs. 1 & 2, App. B, Pgs. 1 & 2
9	05/31/91	Page 2 of 3; Appendix B, pages 1 and 2
10	12/12/91	Pages 1-3/ App. A, pgs. 1-2; App. B, pgs. 1-2
11	05/15/92	Page 2 revised; new coversheet and rev. log added; All pages issued.
12	12/23/92	Pages 1-4; App. A, Pg. 1; App. B, Pg. 1; App. C deleted.
13	01/25/93	Pages 1, 3 & 4; added activation of ERDS system. All pages issued.
14	06/18/93	Page 3; all pages issued.
15	06/24/94	Pages 1-4; App. B, Former App. B changes to App. C.
16	2/17/95	Page 3 Name removal from notification list.
17	7/13/95	Page 4 Changed AL. area code. All pages issued.
18	3/20/96	Page 3 Change M. O. Medford to J. P. Maciejewski; all pages issued.
19	10/30/96	Removed references to SOS, add M. O. Medford to call list, rearrange order of call list, telephone number updates, add statement to clarify CECC security setup instructions. Procedure put in new format. All pages issued.
20	12/12/96	Page 3 remove M. O. Medford. Page 4 add O. J. Zeringue; all pages issued.
21	4/7/97	Annual review. Update State of AL. fax number. All pages issued.
22	7/16/97	Correct telephone number. Modify notification list. All pages issued.
23	9/24/98	Update manual callout list and instructions. All pages issued

CECC-EPIP-3  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR ALERT

REVISION LOG (Continued)

<u>Rev. No.</u>	<u>Date</u>	<u>Revised Pages</u>
<u>24</u>	<u>11/13/00</u>	<u>Add section to cover ODS relocation, editorial changes</u>
<u>25</u>	<u>3/30/01</u>	<u>Annual review. Revise initial State Notification Form. All pages issued.</u>
<u>26</u>	<u>8/23/01</u>	<u>Update notification list. All pages issued.</u>
<u>27</u>	<u>6/13/02</u>	<u>Annual review. Add TPS notification, update notification list, add time to to Initial State Notification Form, editorial changes. All pages issued.</u>
<u>28</u>	<u>7/24/02</u>	<u>Update notification list. Change Automated Paging System to Emergency Paging System. Change CECC Notification Board to REND. All pages issued.</u>
<u>29</u>	<u>9/3/02</u>	<u>Update organizational names. Add Load Coordinator and TPS Transmission Dispatcher phone numbers.</u>
<u>30</u>	<u>10/30/02</u>	<u>Move the procedure step for the ODS to notify the SED of the State notification of the event to a point earlier in the procedure.</u>
<u>31</u>	<u>3/31/03</u>	<u>Annual review, new release terminology added to Initial Notification Form. All pages issued.</u>

**OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR ALERT**

**1.0 PURPOSE**

This procedure is designed to direct the ODS during an Alert to ensure consistent, accurate, and timely response in the event of an emergency.

**2.0 SCOPE**

This procedure covers anticipated requirements of the ODS during an Alert. This procedure should not be used after the CECC has assumed responsibility for communications with the State under CECC EPIP-1.

**3.0 REFERENCES**

Radiological Emergency Plan

**4.0 ABBREVIATIONS AND DEFINITIONS**

EDO - Emergency Duty Officer  
ERDS - Emergency Response Data System  
ODS - Operations Duty Specialist  
CECC - Central Emergency Control Center

**5.0 RESPONSIBILITIES**

- 5.1 Upon notification by the Site Emergency Director that an Alert exists, the ODS is responsible for recording the preliminary report of information concerning the incident on Appendix A.
- 5.2 The ODS is responsible for notifying the appropriate State agency, CECC EDO, CECC Director, Plant Assessment Manager, Radiological Assessment Manager, Load Coordinator, TPS Transmission Dispatcher, and key CECC staff. The ODS is also responsible for notifying technical support personnel as requested.
- 5.3 The ODS is responsible for recording any follow-up information on Appendix B and notifying the appropriate State.

**6.0 PROCEDURE REQUIREMENTS**

**6.1 Actions to be Taken for an Alert**

The ODS performs the following tasks:

**NOTE:** When making notifications of an emergency situation, provide only the information contained on the attachment. Avoid any unnecessary explanation, interpretation, or elaboration of the information. Timeliness and accuracy is of the utmost importance.

(TIME/INITIALS)

\_\_\_\_ / \_\_\_\_ 6.1.1 Upon receiving a call from the Site Emergency Director:

**Turn on Recording Equipment** and enter the following information.

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

Current Time: \_\_\_\_\_

\_\_\_\_ / \_\_\_\_ 6.1.2 Refer to the form in Appendix A and log information to be provided to the State.

6.1.3 Make notification call to the appropriate State (not to exceed 15 minutes from the time of the declaration of the event).

Tennessee

TEMA Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_

(Use the ringdown telephone as the primary means to contact TEMA. If this does not work, then use numbers programmed on phones.)

Alabama

Alabama Office of Radiation Control Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_

**AFTER HOURS NOTIFY**

Montgomery State Trooper Post to have the Office of Radiation Control Duty Officer

call the ODS \_\_\_\_\_ Time: \_\_\_\_\_

(See numbers programmed on phones.)

(TIME/INITIALS)

\_\_\_\_ / \_\_\_\_ 6.1.4 If event **has been terminated** refer to CECC-EPIP-2 and perform Sections 6.1.4 through 6.1.10 of that procedure for notification and receive further guidance from the EDO.

\_\_\_\_ / \_\_\_\_ 6.1.5 If event **has not been terminated**, activate Emergency Paging System. Monitor the Emergency Paging System screen. If any critical positions do not respond within 15 minutes or indicate they cannot respond, then use the REND or REP duty list to contact duty or backup staff for those positions. Appendix C will be used to document Fitness for Duty for positions contacted by telephone. Steps 6.1.6 through 6.1.26 of this procedure should be done in parallel with these actions as time permits.

-OR-

If **Emergency Paging System is not operable**, notify the following and have them report to the center (see the REPTRACK Duty List or REND). Initial attempts to fill critical positions should be performed before moving on to non-critical positions and steps 6.1.6 through 6.1.26 of this procedure. Appendix C will be used to document fitness for duty.

Critical Positions	
____ / ____	CECC EDO
____ / ____	CECC Director
____ / ____	Radiological Assessment Manager
____ / ____	Plant Assessment Manager
____ / ____	Dose Assessor
____ / ____	Plant Assessment Team Leader
____ / ____	Plant Assessment Coordinator
____ / ____	Nuclear Emergency Public Information Duty Officer

\_\_\_\_ / \_\_\_\_ Environs Assessor  
 \_\_\_\_ / \_\_\_\_ Management Services Supervisor  
 \_\_\_\_ / \_\_\_\_ Resource Support Coordinator  
 \_\_\_\_ / \_\_\_\_ Core Damage  
 \_\_\_\_ / \_\_\_\_ Engineering Representative  
 \_\_\_\_ / \_\_\_\_ Meteorologist  
 \_\_\_\_ / \_\_\_\_ Communications Support Personnel (Telephones)  
 \_\_\_\_ / \_\_\_\_ Computer Support Personnel  
 \_\_\_\_ / \_\_\_\_ B. K. Marks

\*Revision

- \_\_\_\_ / 6.1.6 If event has not been terminated, activate the ERDS system (not to exceed 1 hour after the declaration of the event). If the ERDS system fails to activate, continue with the next step (6.1.7) of this procedure
- \_\_\_\_ / 6.1.7 Inform the Site Emergency Director that the respective state has been notified.
- \_\_\_\_ / 6.1.8 Notify the CECC EDO.
- \_\_\_\_ / 6.1.9 Notify COC Security (751-3783) and request that security be established and key card access be initiated.

If the ODS is located in the Power Business Center and conditions allow relocation to the CECC continue with step 6.1.10 of this procedure, if the ODS is located in the CECC or is not relocating to the CECC proceed to section 6.1.17 of this procedure

- \_\_\_\_ / 6.1.10 Transfer 751-1700 to the cellular phone.
- \_\_\_\_ / 6.1.11 Notify TEMA (for SQN and WBN events) that the ODS will be in transit to the CECC and that all calls should be made to 423-751-1700 until further notice.
- \_\_\_\_ / 6.1.12 Relocate to the CECC.

Upon arrival in the CECC perform the following:

- \_\_\_\_ / 6.1.13 Follow up on any calls received during transit to the CECC.
- \_\_\_\_ / 6.1.14 Place the "A-B" switches for the Paging, ERDS and Alarm Notification Systems to the "A" position
- \_\_\_\_ / 6.1.15 Transfer 751-1700 and the three site ringdown phones from the cellular phone back to the desktop phone.
- \_\_\_\_ / 6.1.16 Notify TEMA (for SQN and WBN events) that the ODS is in the CECC and can now use the ringdown phone for communications.

- \_\_\_\_ / 6.1.17 Notify J. E. Maddox (See REND Call-Out List-SNE).
- \_\_\_\_ / 6.1.18 Notify J. A. Scalice (See REND Call-Out List-SNE).
- \_\_\_\_ / 6.1.19 Notify the Load Coordinator of the condition (751-7547).
- \_\_\_\_ / 6.1.20 Notify the TPS Transmission Dispatcher of the condition  
BFN: SW Dispatch 751-4203  
SQN: SE Dispatch 751-4208  
WBN: NE Dispatch 751-4204
- \_\_\_\_ / 6.1.21 Upon receiving telecopy of the Site Emergency Director event form, verify the information recorded on Appendix A of this procedure is correct.



- \*        /        6.1.22 Telecopy Appendix A of this procedure to the affected State.
- AL. Office of Radiation Control (334) 206-5387  
TEMA (615) 242-9635
- /        6.1.23 Verify that the telecopy to the State has been received (only during normal working hours for AL. Office of Radiation Control). Use programmed telephone number for the affected State.
- /        6.1.24 If the ERDS system failed to activate in step 6.1.6 of this procedure, notify the computer support duty officer and the NRC duty officer at telephone number (301) 816-5100.
- /        6.1.25 Refer to the form in Appendix B, log follow-up information, and provide to the appropriate State.
- /        6.1.26 Continue attempts to contact any critical or non-critical positions in Section 6.1.5 of this procedure that have not responded.

\*Revision

APPENDIX A  
Page 1 of 1

TVA INITIAL NOTIFICATION FORM FOR ALERT

1. ☐ This is a Drill ☐ This is an Actual Event - Repeat - This is an Actual Event

2. This is \_\_\_\_\_, ☐ Browns Ferry  
TVA Operations Duty Specialist ☐ Sequoyah has declared an **ALERT**  
At telephone number (423) 751-1700 ☐ Watts Bar  
affecting: ☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

3. EAL Designator(s): \_\_\_\_\_

4. Brief Description of the Event: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Radiological Conditions: (Check one under both Airborne and Liquid column.)  
**Airborne Releases Offsite** **Liquid Releases Offsite**  
☐ Minor releases within federally approved limits<sup>1</sup> ☐ Minor releases within federally approved limits<sup>1</sup>  
☐ Releases above federally approved limits<sup>1</sup> ☐ Releases above federally approved limits<sup>1</sup>  
☐ Release information not known ( <sup>1</sup>Tech Specs ) ☐ Release information not known ( <sup>1</sup>Tech Specs )

6. Event Declared: Time: \_\_\_\_\_ Date: \_\_\_\_\_

7. Provide Protective Action Recommendation: ☐ None

8. Please repeat the information you have received to ensure accuracy.

9. Time and Date this information was provided \_\_\_\_\_ / \_\_\_\_\_

Action: When completed, telecopy this information.

APPENDIX B Page 1 of 1

FOLLOW-UP INFORMATION FORM  
ALERT

1. "This is a Real Emergency. This is a Real Emergency." ☐  
or

"This is a Drill. This is a Drill." ☐

2. Time \_\_\_\_\_

3. The following significant changes in Plant Conditions have occurred.

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4. The following significant changes in Radiological Conditions have occurred. \_\_\_\_\_

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

6. Time information provided to State. \_\_\_\_\_

7. Name \_\_\_\_\_ Date \_\_\_\_\_

Note: When completed telecopy this Form to the State.

[illegible]

Tennessee Valley Authority	Title	CECC EPIP-4 REV. 32										
CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN IMPLEMENTING PROCEDURES	OPERATIONS DUTY SPECIALIST PROCEDURE FOR SITE AREA EMERGENCY	Effective Date: <b>3/31/03</b>										
<p>WRITTEN BY: <u><i>Thomas F. Aldrin</i></u>      REVIEWED BY: <u><i>M. Mah</i></u>      <u><b>3/24/2003</b></u> Signature    Signature    Date</p> <p>PLAN EFFECTIVENESS DETERMINATION: <u><i>Thomas F. Aldrin</i></u>      <u><b>3/24/03</b></u> Signature    Date</p> <p style="text-align: center;"><b>CONCURRENCES</b></p> <table border="1"> <thead> <tr> <th>Concurrence Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <i>Daniel Pond</i></td> <td><u><b>3/25/2003</b></u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Emergency Preparedness <i>BKM Marks</i></td> <td><u><b>3/25/03</b></u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandras</i></td> <td><u><b>3/27/03</b></u></td> </tr> <tr> <td><input type="checkbox"/></td> <td>_____</td> </tr> </tbody> </table>			Concurrence Signature	Date	<input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <i>Daniel Pond</i>	<u><b>3/25/2003</b></u>	<input checked="" type="checkbox"/> Manager, Emergency Preparedness <i>BKM Marks</i>	<u><b>3/25/03</b></u>	<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandras</i>	<u><b>3/27/03</b></u>	<input type="checkbox"/>	_____
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<input type="checkbox"/>	_____											

APPROVED BY: Marilyn Burzynski Vice President, E&TS 3/27/03  
Signature Title Organization Date

CECC-EPIP-4  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR SITE AREA EMERGENCY

REVISION LOG

Rev. No.	Date	Revised Pages
0	3/22/88	All (changed from IPD to EPIP)
1	4/27/88	4
2	7/8/88	Pages 3 & 4, Page 2 of App. B
3	11/18/88	3, 4
4	4/26/89	All
5	7/13/89	3, 4
6	9/19/89	All
7	10/26/89	2, App. A (pg. 2), App. B (p. 2)
8	5/23/90	"General Emergency" moved to EPIP-5, App. A (p. 2), App. B (p.2), App. C added (p.1).
9	5/21/91	Pages 2 & 3, App. A, Pgs. 1 & 2, App. B, Pgs. 1 & 2
10	5/31/91	Page 2 of 3; Appendix B, Pages 1 & 2
11	12/12/91	Pages 1-3; App. A, pgs. 1-2, App. B, pgs. 1-2.
12	05/15/92	Page 2 revised; new coversheet and rev. log added; all pages issued.
13	12/23/92	All
14	01/25/93	Pages 1, 3-4, add activation of ERDS system. All pages issued.
15	06/18/93	Page 3; all pages issued.
16	06/24/94	Pages 1-4; App. B; Former App. B changed to App. C.
17	2/17/95	Page 3 Name removal from notification list.
18	7/13/95	Page 4 Change AL. Area code. All pages issued.
19	3/20/96	Page 3 Change M. O. Medford to J. P. Maciejewski; All pages issued.
20	10/30/96	Remove references to SOS, add M. O. Medford to call list, telephone number updates; add statement to clarify CECC security setup instructions. Procedures put in new format. All pages issued.
21	12/12/96	Page 3 removed M. O. Medford; Page 4 add O. J. Zeringue; All pages issued.
22	4/7/97	Annual review, update State of AL. fax number. All pages issued.

CECC-EPIP-4  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR SITE AREA EMERGENCY

Rev. No.	Date	REVISION LOG (Continued)
		Revised Pages
<u>23</u>	<u>7/16/97</u>	<u>Correct telephone number. Modify notification list. All pages issued.</u>
<u>24</u>	<u>9/24/98</u>	<u>Annual review. Update manual callout list. All pages issued.</u>
<u>25</u>	<u>11/13/00</u>	<u>Add section to cover ODS relocation, editorial changes.</u>
<u>26</u>	<u>3/30/01</u>	<u>Annual review. Revise initial State Notification Form. All pages issued.</u>
<u>27</u>	<u>8/23/01</u>	<u>Update notification list. All pages issued.</u>
<u>28</u>	<u>6/13/02</u>	<u>Annual review. Add TPS notification, update notification list, add time to Initial State Notification Form, editorial changes. All pages issued.</u>
<u>29</u>	<u>7/24/02</u>	<u>Update notification list. Change Automated Paging to Emergency Paging System. Change CECC Notification Board to REND. All pages issued.</u>
<u>30</u>	<u>9/3/02</u>	<u>Update organization names. Add Load Coordinator and TPS Transmission Dispatcher phone numbers.</u>
<u>31</u>	<u>10/30/02</u>	<u>Move the procedure step for the ODS to notify the SED of the State notification of the event to a point earlier in the procedure.</u>
<u>32</u>	<u>3/31/03</u>	<u>Annual review, new release terminology added to Initial Notification Form. All pages issued.</u>

**OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR SITE AREA EMERGENCY**

**1.0 PURPOSE**

This procedure is designed to direct the ODS during a Site Area Emergency to ensure consistent, accurate, and timely response in the event of an emergency.

**2.0 SCOPE**

This procedure covers anticipated requirements of the ODS during a Site Area Emergency. This procedure should not be used after the CECC has assumed responsibility for communication with the State under CECC-EPIP-1.

**3.0 REFERENCES**

Radiological Emergency Plan

**4.0 ABBREVIATIONS AND DEFINITIONS**

EDO - Emergency Duty Officer  
ERDS - Emergency Response Data System  
ODS - Operations Duty Specialist  
CECC - Central Emergency Control Center

**5.0 RESPONSIBILITIES**

- 5.1 Upon notification by the Site Emergency Director that a Site Area Emergency exists, the ODS is responsible for recording the preliminary report of information concerning the incident on Appendix A.
- 5.2 The ODS is responsible for notifying the appropriate State agency, CECC EDO, CECC Director, Plant Assessment Manager, Radiological Assessment Manager, Load Coordinator, TPS Transmission D-is patcher, and key CECC staff. The ODS is also responsible for notifying technical support personnel as requested.
- 5.3 The ODS is responsible for recording any follow-up information on Appendix B and notifying the appropriate State.

**6.0 PROCEDURE REQUIREMENTS**

- 6.1 Actions to be Taken for a Site Area Emergency

The ODS performs the following tasks:

**NOTE:** When making notifications of an emergency situation, provide only the information contained on the attachment. Avoid any unnecessary explanation, interpretation, or elaboration of the information. Timeliness and accuracy is of the utmost importance.



(TIME/INITIALS)

\_\_\_\_ / \_\_\_\_ 6.1.1 Upon receiving a call from the Site Emergency Director:

**Turn on Recording Equipment** and enter the following information.

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

Current Time: \_\_\_\_\_

\_\_\_\_ / \_\_\_\_ 6.1.2 Refer to the form in Appendix A and log information to be provided to the State.

6.1.3 Make notification call to the appropriate State (not to exceed 15 minutes from the time of the declaration of the event).

Tennessee

TEMA Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_  
(Use the ringdown telephone as the primary means to contact TEMA. If this does not work, then use numbers programmed on phones.)

Alabama

Alabama Office of Radiation Control Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_

**AFTER HOURS NOTIFY**

Montgomery State Trooper Post to have the Office of Radiation Control Duty Officer call the ODS \_\_\_\_\_ Time: \_\_\_\_\_  
(See numbers programmed on phones.)

(TIME/INITIALS)

- \_\_\_\_ / \_\_\_\_ 6.1.4 If event has been terminated refer to CECC-EPIP-2 and perform Sections 6.1.4 through of that procedure 6.1.10 for notification and receive further guidance from the EDO.
- \_\_\_\_ / \_\_\_\_ 6.1.5 If the event **has not been terminated**, activate Emergency Paging System. Monitor the Emergency Paging System screen. If any critical positions do not respond within 15 minutes or indicate they cannot respond, then use the REND or REP duty list to contact duty or backup staff for those positions. Appendix C will be used to document Fitness for Duty for positions contacted by telephone. Steps 6.1.6 through 6.1.26 of this procedure should be done in parallel with these actions as time permits.

-OR-

**If Emergency Paging System is not operable**, notify the following and have them report to the center (see the REPTRACK Duty List or REND). Initial attempts to fill critical positions should be performed before moving on to non-critical positions and steps 6.1.6 through 6.1.26 of this procedure. Appendix C will be used to document fitness for duty.

Critical Positions	
____ / ____	CECC EDO
____ / ____	CECC Director
____ / ____	Radiological Assessment Manager
____ / ____	Plant Assessment Manager
____ / ____	Dose Assessor
____ / ____	Plant Assessment Team Leader
____ / ____	Plant Assessment Coordinator
____ / ____	Nuclear Emergency Public Information Duty Officer

____ / ____	Environs Assessor
____ / ____	Management Services Supervisor
____ / ____	Resource Support Coordinator
____ / ____	Core Damage
____ / ____	Engineering Representative
____ / ____	Meteorologist
____ / ____	Communications Support Personnel (Telephones)
____ / ____	Computer Support Personnel
____ / ____	B. K. Marks

- / 6.1.6 If event has not been terminated, activate the ERDS system (not to exceed 1 hour after the declaration of the event). If the ERDS system fails to activate continue with the next step (6.1.7) of this procedure.
- / 6.1.7 Inform the Site Emergency Director that the respective state has been notified.
- / 6.1.8 Notify the CECC EDO.
- / 6.1.9 Notify COC Security (751-3783) and request that security be established and key card access be initiated.

If the ODS is located in the Power Business Center and conditions allow relocation to the CECC continue with step 6.1.10 of this procedure, if the ODS is located in the CECC or is not relocating to the CECC proceed to section 6.1.17 of this procedure.

- / 6.1.10 Transfer 751-1700 to the cellular phone.
- / 6.1.11 Notify TEMA (for SQN and WBN events) that the ODS will be in transit to the CECC and that all calls should be made to 423-751-1700 until further notice.
- / 6.1.12 Relocate to the CECC.

Upon arrival in the CECC perform the following.

- / 6.1.13 Follow up on any calls received during transit to the CECC.
- / 6.1.14 Place the "A-B" switches for the Paging, ERDS and Alarm Notification Systems to the "A" position.
- / 6.1.15 Transfer 751-1700 and the three site ringdown phones from the cellular phone back to the desktop phone.
- / 6.1.16 Notify TEMA (for SQN and WBN events) that the ODS is in the CECC and can now use the ringdown phone for communications.

- / 6.1.17 Notify J. E. Maddox (See REND Call-Out List-SNE).
- / 6.1.18 Notify J. A. Scalice (See REND Call-Out List-SNE).
- / 6.1.19 Notify the Load Coordinator of the condition (751-7547).
- / 6.1.20 Notify the TPS Transmission Dispatcher of the condition.  
BFN: SW Dispatch 751-4203  
SQN: SE Dispatch 751-4208  
WBN: NE Dispatch 751-4204
- / 6.1.21 Upon receiving telecopy of the Site Emergency Director event form, verify the information recorded on Appendix A of this procedure is correct.
- \*          / 6.1.22 Telecopy Appendix A of this procedure to the affected State.  
AL. Office of Radiation Control (334) 206-5387  
TEMA (615) 242-9635

- \_\_\_\_ / \_\_\_\_ 6.1.23 Verify that the telecopy to the State has been received (only during normal working hours for AL. Office of Radiation Control). Use programmed telephone number for the affected State.
- \_\_\_\_ / \_\_\_\_ 6.1.24 If the ERDS system failed to activate in step 6.1.6 of this procedure, notify the computer support duty officer and the NRC duty officer at telephone number (301) 816-5100.
- \_\_\_\_ / \_\_\_\_ 6.1.25 Refer to the form in Appendix B, log follow-up information, and provide to the appropriate State.
- \_\_\_\_ / \_\_\_\_ 6.1.26 Continue attempts to contact any critical or non-critical positions in section 6.1.5 of this procedure that have not responded.

APPENDIX A  
Page 1 of 1

TVA INITIAL NOTIFICATION FORM FOR SITE AREA EMERGENCY

1. ☐ This is a Drill ☐ This is an Actual Event - Repeat - This is an Actual Event

2. This is \_\_\_\_\_, ☐ Browns Ferry  
TVA Operations Duty Specialist ☐ Sequoyah has declared a  
At telephone number (423) 751-1700 ☐ Watts Bar

**SITE  
AREA  
EMERGENCY**

affecting: ☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

3. EAL Designator(s): \_\_\_\_\_

4. Brief Description of the Event: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Radiological Conditions: (Check one under both Airborne and Liquid column.)

Airborne Releases Offsite

- ☐ Minor releases within federally approved limits<sup>1</sup>  
☐ Releases above federally approved limits<sup>1</sup>  
☐ Release information not known

(<sup>1</sup>Tech Specs)

Liquid Releases Offsite

- ☐ Minor releases within federally approved limits<sup>1</sup>  
☐ Releases above federally approved limits<sup>1</sup>  
☐ Release information not known

(<sup>1</sup>Tech Specs)

6. Event Declared: Time: \_\_\_\_\_ Date: \_\_\_\_\_

7. Provide Protective Action Recommendation: ☐ None

8. Please repeat the information you have received to ensure accuracy.

9. Time and Date this information was provided \_\_\_\_\_ / \_\_\_\_\_

**Action: When completed, telecopy this information.**

APPENDIX B Page 1 of 1

FOLLOW-UP INFORMATION FORM  
SITE AREA EMERGENCY

1. "This is a Real Emergency. This is a Real Emergency." ☐  
or  
"This is a Drill. This is a Drill." ☐

2. Time \_\_\_\_\_

3. The following significant changes in Plant Conditions have occurred.

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---

4. The following significant changes in Radiological Conditions have occurred. \_\_\_\_\_

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

6. Time information provided to State. \_\_\_\_\_

7. Name \_\_\_\_\_ Date \_\_\_\_\_

Note: When completed telecopy this Form to the State.

[illegible]

## CECC EPIP Coversheet

Tennessee Valley Authority  CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN IMPLEMENTING PROCEDURES	Title  OPERATIONS DUTY SPECIALIST PROCEDURE FOR GENERAL EMERGENCY	CECC EPIP-5 REV. 34  Effective Date: <u>3/3/03</u>										
<p>WRITTEN BY: <u>Thomas E. Aldrin</u> Signature      REVIEWED BY: <u>[Signature]</u> Signature      <u>3/24/2003</u> Date</p> <p>PLAN EFFECTIVENESS DETERMINATION: <u>Thomas E. Aldrin</u> Signature      <u>3/24/03</u> Date</p> <p style="text-align: center;"><b>CONCURRENCES</b></p> <table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 70%;">Concurrence Signature</th> <th style="width: 30%;">Date</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <u>David Pond</u></td> <td><u>3/25/2003</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Emergency Preparedness <u>BK Marks</u></td> <td><u>3/26/03</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <u>Chandran</u></td> <td><u>3/27/03</u></td> </tr> <tr> <td><input type="checkbox"/></td> <td>_____</td> </tr> </tbody> </table>			Concurrence Signature	Date	<input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <u>David Pond</u>	<u>3/25/2003</u>	<input checked="" type="checkbox"/> Manager, Emergency Preparedness <u>BK Marks</u>	<u>3/26/03</u>	<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <u>Chandran</u>	<u>3/27/03</u>	<input type="checkbox"/>	_____
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<p style="text-align: center;"><b>APPROVAL</b></p> <table border="1" style="width: 100%;"> <tr> <td style="width: 40%;">APPROVED BY: <u>Wally Burzinski</u> Signature</td> <td style="width: 30%;">Vice President, E&amp;TS Title      Organization</td> <td style="width: 30%;"> <u>3/27/03</u> Date         </td> </tr> </table>			APPROVED BY: <u>Wally Burzinski</u> Signature	Vice President, E&TS Title      Organization	<u>3/27/03</u> Date							
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CECC-EPIP-5  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR GENERAL EMERGENCY

REVISION LOG

Rev. No.	Date	Revised Pages
0	3/22/88	All (Changed from IPD to EPIP)
1	7/8/88	App. B
2	11/18/88	App. B
3	4/26/89	All
4	7/13/89	App. A (pgs. 2, 3, 4), App. B
5	9/19/89	App. D (pg. 2)
6	10/26/89	3-5, App. A (1, 3-4), App. B, App. D, App. G-I
7	5/23/90	All (Formerly issued as EPIP-4)
8	5/21/91	Pages 2 & 3, App. A, Pgs. 1 & 2, App. B, Pgs. 1 & 2
9	5/31/91	Page 2 of 3; Appendix B, pages 1 and 2
10	12/12/91	Pages 1-3; App. A, pgs. 1-2; App. B, pgs. 1-2.
11	05/15/92	Page 2 revised; new coversheet & rev. log added. All pages issued.
12	12/23/92	All
13	01/25/93	Page 1, 4, add activation of ERDS system. All pages issued.
14	06/18/93	Pages 2 and 3; all pages issued.
15	03/17/94	Pages 1-4; all pages issued.
16	04/19/94	Pages 1-4; all pages issued.
17	06/24/94	Pages 1-4; all pages issued.
18	07/25/94	Page 2 (new Hamilton Co. telephone number). All pages issued.
19	2/17/95	Page 3 Name removal from notification list.
20	7/13/95	Page 4 change AL. area code. All pages issued.
21	3/20/96	Page 2 change to new telephone area code, page 3 change M. O. Medford to J. P. Maciejewski; all pages issued.
22	10/30/96	Remove references to SOS, add M. O. Medford to call list, rearrange order of call list, telephone number updates, add statement to clarify CECC security setup instructions. Procedure put in new format. All pages issued.

CECC-EPIP-5  
OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR GENERAL EMERGENCY

Rev. No.	Date	REVISION LOG (Continued)
		Revised Pages
<u>23</u>	<u>12/12/96</u>	<u>Page 3 remove M. O. Medford; Page 4 add O. J. Zeringue;</u> <u>All pages issued.</u>
<u>24</u>	<u>4/7/97</u>	<u>Annual review, update county emergency telephone numbers,</u> <u>correct typographical error in Appendix A. All pages issued.</u>
<u>25</u>	<u>7/16/97</u>	<u>Correct telephone number. Modify notification list. All pages issued.</u>
<u>26</u>	<u>9/24/98</u>	<u>Annual review. Update telephone area code and manual callout</u> <u>list. All pages issued.</u>
<u>27</u>	<u>11/13/00</u>	<u>Add section to cover ODS relocation, editorial changes.</u>
<u>28</u>	<u>3/30/01</u>	<u>Annual review. Revise initial State Notification Form.</u> <u>Update Morgan County after hours telephone number. All pages</u> <u>issued.</u>
<u>29</u>	<u>8/23/01</u>	<u>Updated telephone numbers and notification list. All pages issued.</u>
<u>30</u>	<u>6/13/02</u>	<u>Annual review. Add TPS notification, update notification list, add</u> <u>time to Initial State Notification Form, editorial changes. All</u> <u>pages issued.</u>
<u>31</u>	<u>7/24/02</u>	<u>Update notification list. Change Automated Paging System to</u> <u>Emergency Paging System. Change CECC Notification Board to</u> <u>REND. All pages issued.</u>
<u>32</u>	<u>9/3/02</u>	<u>Update organization names. Add Load Coordinator and TPS</u> <u>Transmission Dispatcher phone numbers.</u>
<u>33</u>	<u>10/30/02</u>	<u>Move the procedure step for the ODS to notify the SED of the</u> <u>State notification of the event to a point earlier in the procedure.</u>
<u>34</u>	<u>3/31/03</u>	<u>Annual review. New release terminology, Potassium Iodide</u> <u>recommendation, and identification of impacted sectors based on</u> <u>a range of wind directions added to Appendix A. All pages issued.</u>

**OPERATIONS DUTY SPECIALIST  
PROCEDURE FOR GENERAL EMERGENCY**

**1.0 PURPOSE**

This procedure is designed to direct the ODS during a General Emergency to ensure consistent, accurate, and timely response in the event of an emergency.

**2.0 SCOPE**

This procedure covers the action of the ODS during a General Emergency. This procedure should not be used after the CECC has assumed responsibility for communications with the State under EPIP-1.

**3.0 REFERENCES**

Radiological Emergency Plan

**4.0 ABBREVIATIONS AND DEFINITIONS**

EDO - Emergency Duty Officer  
EMA - Emergency Management Agency  
ERDS - Emergency Response Data System  
ODS - Operations Duty Specialist  
CECC - Central Emergency Control Center

**5.0 RESPONSIBILITIES**

- 5.1 Upon notification by the Site Emergency Director that a General Emergency exists, the ODS is responsible for recording the preliminary report of information concerning the incident including the Protective Action Recommendation (PAR) on Appendix A.

- 5.2 The ODS is responsible for notifying the appropriate state and local agencies, CECC EDO, CECC Director, Plant Assessment Manager, Radiological Assessment Manager, Load Coordinator, TPS Transmission Dispatcher, and key CECC staff. The ODS is responsible for notifying technical support personnel as requested.

- 5.3 The ODS is responsible for recording any follow-up information on Appendix B and notifying the appropriate state.

**6.0 PROCEDURE REQUIREMENTS**

- 6.1 Action to be Taken for a General Emergency

The ODS performs the following tasks:

**NOTE:** When making notifications of an emergency situation, provide only the information contained on the attachment. Avoid any unnecessary explanation, interpretation, or elaboration of the information. Timeliness and accuracy is of the utmost importance.

(TIME/INITIALS)

\_\_\_\_ / \_\_\_\_ 6.1.1 Upon receiving a call from the Site Emergency Director:

**Turn on Recording Equipment.**

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

\* \_\_\_\_ / \_\_\_\_ 6.1.2 Refer to the form in Appendix A for the affected plant and log information  
\* including the Protective Action Recommendation (PAR) to be provided to  
\* the local counties/State.

\_\_\_\_ / \_\_\_\_ 6.1.3 Activate the emergency paging system. (If emergency paging system fails, go to 6.1.4.)

6.1.4 Make notification call to the appropriate counties (initiation of notifications not to exceed 15 minutes from the time of the declaration of the event):

**Browns Ferry**

Limestone County: (256) 232-2631 Time: \_\_\_\_\_  
(After hrs) (256) 232-0111

Morgan County (256) 351-4620 Time: \_\_\_\_\_  
(After hrs) (256) 353-2515 opt 0

Lawrence County (256) 974-7641 Time: \_\_\_\_\_  
(After hrs) (256) 974-7911

Lauderdale County (256) 766-4201 Time: \_\_\_\_\_  
(After hrs) (256) 760-9117

**Sequoyah**

Hamilton County (423) 209-6900 Time: \_\_\_\_\_  
(After hrs) (423) 622-7777 or 622-0022

Bradley County (423) 476-0606 Time: \_\_\_\_\_  
(After hrs) (423) 476-7511

**Watts Bar**

Rhea County (423) 775-2505 Time: \_\_\_\_\_  
(After hrs) (423) 775-7828

Meigs County (423) 334-3211 Time: \_\_\_\_\_  
(After hrs) (423) 334-5268

McMinn County (423) 744-2715 Time: \_\_\_\_\_  
(After hrs) (423) 745-3140

\*Revision

(TIME/INITIALS)

6.1.5 Make notification call to the appropriate State.

Tennessee

TEMA Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_  
(Use the ringdown telephone as the primary means to contact TEMA. If this does not work, then use numbers programmed on phones.)

Alabama

Alabama Office of Radiological Control Duty Officer: \_\_\_\_\_ Time: \_\_\_\_\_

#### AFTER HOURS NOTIFY

Montgomery State Trooper Post to have Office of Radiological Control Duty Officer call the ODS \_\_\_\_\_ Time: \_\_\_\_\_  
(See numbers programmed on phones.)

6.1.6 Monitor the Emergency Paging System screen. If any critical positions do not respond within 15 minutes or indicate they cannot respond, then use the REPTRACK Duty List or REND to contact duty or backup staff for those positions. Appendix C will be used to document Fitness for Duty for positions contacted by telephone. Steps 6.1.7 through 6.1.27 of this procedure should be done in parallel with these actions as time permits.

Or

If the Emergency Paging System is not operable, notify the following and have them report to the CECC. (See REPTRACK Duty List or REND for names and phone numbers). Initial attempts to fill critical positions should be performed before moving on to non-critical positions and steps 6.1.7 through 6.1.27 of this procedure. Appendix C will be used to document fitness for duty.

Critical Positions	
_____ /	CECC EDO
_____ /	CECC Director
_____ /	Radiological Assessment Manager
_____ /	Plant Assessment Manager
_____ /	Dose Assessor
_____ /	Plant Assessment Team Leader
_____ /	Plant Assessment Coordinator
_____ /	Nuclear Emergency Public Information Duty Officer

_____ /	Enviroins Assessor
_____ /	Management Services Supervisor
_____ /	Resource Support Coordinator
_____ /	Core Damage
_____ /	Engineering Representative
_____ /	Meteorologist
_____ /	Communications Support Personnel (Telephones)
_____ /	Computer Support Personnel
_____ /	B. K. Marks

- \_\_\_\_ / \_\_\_\_ 6.1.7 Activate the ERDS system (not to exceed 1 hour after the declaration of the event). If the ERDS system fails to activate, continue with the next step (6.1.8) of this procedure.
- \_\_\_\_ / \_\_\_\_ 6.1.8 Inform the Site Emergency Director that the State and appropriate local Emergency Management Agencies have been notified.
- \_\_\_\_ / \_\_\_\_ 6.1.9 Notify the CECC EDO.
- \_\_\_\_ / \_\_\_\_ 6.1.10 Notify COC Security (751-3783) and request that security be established and key card access be initiated.

If the ODS is located in the Power Business Center and conditions allow relocation to the CECC continue with step 6.1.11 of this procedure. If the ODS is located in the CECC or is not relocating to the CECC proceed to section 6.1.18 of this procedure.

- \_\_\_\_ / \_\_\_\_ 6.1.11 Transfer 751-1700 to the cellular phone.
- \_\_\_\_ / \_\_\_\_ 6.1.12 Notify TEMA (for SQN and WBN events) that the ODS will be in transit to the CECC and that all calls should be made to 423-751-1700 until further notice.
- \_\_\_\_ / \_\_\_\_ 6.1.13 Relocate to the CECC.

Upon arrival in the CECC perform the following:

- \_\_\_\_ / \_\_\_\_ 6.1.14 Follow up on any calls received during transit to the CECC.
- \_\_\_\_ / \_\_\_\_ 6.1.15 Place the "A-B" switches for the Paging, ERDS and Alarm Notification Systems to the "A" position.
- \_\_\_\_ / \_\_\_\_ 6.1.16 Transfer 751-1700 and the three site ringdown phones from the cellular phone back to the desktop phone.
- \_\_\_\_ / \_\_\_\_ 6.1.17 Notify TEMA (for SQN and WBN events) that the ODS is in the CECC and can now use the ringdown phone for communications.

- \_\_\_\_ / \_\_\_\_ 6.1.18 Notify J. E. Maddox (See REND Call-Out List-SNE).
- \_\_\_\_ / \_\_\_\_ 6.1.19 Notify J. A. Scalice (See REND Call-Out List-SNE).
- \_\_\_\_ / \_\_\_\_ 6.1.20 Notify the Load Coordinator of the condition (751-7547).
- \_\_\_\_ / \_\_\_\_ 6.1.21 Notify the TPS Transmission Dispatcher of the condition.  
BFN: SW Dispatch 751-4203  
SQN: SE Dispatch 751-4208  
WBN: NE Dispatch 751-4204
- \_\_\_\_ / \_\_\_\_ 6.1.22 Upon receiving telecopy of the Site Emergency Director event form, verify the information recorded on Appendix A of this procedure is correct.

- \*        /        6.1.23 Telecopy the affected plant page of Appendix A of this procedure to the affected State.

AL Office of Radiological Control (334) 206-5387  
TEMA (615) 242-9635

- /        6.1.24 Verify that the telecopy to the State has been received (only during normal working hours for AL Office Radiological Control). Use programmed telephone number for the affected State.

- /        6.1.25 If the ERDS system failed to activate in step 6.1.7 of this procedure, notify the computer support duty officer and the NRC duty officer at telephone number (301) 816-5100.

- /        6.1.26 Refer to the form in Appendix B, log follow-up information, and provide to the appropriate state.

- /        6.1.27 Continue attempts to contact any critical or non-critical positions in section 6.1.6 of this procedure that have not responded.

\*Revision

APPENDIX A Page 1 of 3 BROWNS FERRY

1. ☐ This is a Drill ☐ This is an Actual Event - Repeat - This is an Actual Event
2. This is \_\_\_\_\_, TVA Operations Browns Ferry has **GENERAL EMERGENCY**  
Duty Specialist at (423) 751-1700 declared a
- affecting: ☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

3. EAL Designator(s): \_\_\_\_\_

4. Brief Description of the Event: \_\_\_\_\_

5. Radiological Conditions: (Check one under both Airborne and Liquid column.)

Airborne Releases Offsite

Liquid Releases Offsite

- ☐ Minor releases within federally approved limits<sup>1</sup>  
☐ Releases above federally approved limits<sup>1</sup>  
☐ Release information not known

- ☐ Minor releases within federally approved limits<sup>1</sup>  
☐ Releases above federally approved limits<sup>1</sup>  
☐ Release information not known

(<sup>1</sup>Tech Specs)

(<sup>1</sup>Tech Specs)

6. Event Declared: Time: \_\_\_\_\_ Date: \_\_\_\_\_

7. The Meteorological Conditions are: (Use 90 meter data from the Met Tower)

Wind Direction is FROM: \_\_\_\_\_ degrees Wind Speed: \_\_\_\_\_ m.p.h

8. Provide Protective Action Recommendation: (Check either 1 or 2, and mark wind direction.)

☐ **Recommendation 1**

- ▶ EVACUATE LISTED SECTORS (2 mile Radius & 10 miles downwind)
- ▶ SHELTER all non-listed sectors.
- ▶ CONSIDER issuance of Potassium Iodide in accordance with the State Plan.

WIND  
FROM °  
(Mark)

☐ **Recommendation 2**

- ▶ EVACUATE LISTED SECTORS (2 mile radius & 5 mile downwind)
- ▶ SHELTER all other non-listed sectors.
- ▶ CONSIDER issuance of Potassium Iodide in accordance with the State Plan.

A-2, B-2, F-2, G-2, E-5, -10, F-5, -10, G-5, -10

4 - 40

A-2, B-2, F-2, G-2, E-5, F-5, G-5

A-2, B-2, F-2, G-2, F-5, -10, G-5, -10, H-10

41 - 73

A-2, B-2, F-2, G-2, F-5, G-5

A-2, B-2, F-2, G-2, G-5, -10, H-10, I-10

74 - 92

A-2, B-2, F-2, G-2, G-5

A-2, B-2, F-2, G-2, A-5, G-5, H-10, I-10, J-10, K-10

93 - 137

A-2, B-2, F-2, G-2, A-5, G-5

A-2, B-2, F-2, G-2, A-5, -10, I-10, J-10, K-10

138 - 203

A-2, B-2, F-2, G-2, A-5

A-2, B-2, F-2, G-2, A-5, -10, B-5, -10

204 - 282

A-2, B-2, F-2, G-2, A-5, B-5

A-2, B-2, F-2, G-2, B-5, -10, C-10, D-10, E-5, -10

283 - 326

A-2, B-2, F-2, G-2, B-5, E-5

A-2, B-2, F-2, G-2, C-10, D-10, E-5, -10, F-5, -10

327 - 3

A-2, B-2, F-2, G-2, E-5, F-5

9. Please repeat the information you have received to ensure accuracy.

10. Time and Date this information was provided \_\_\_\_\_ / \_\_\_\_\_

Action: When completed, telecopy this information.

New Page



APPENDIX A Page 2 of 3

SEQUOYAH

1. ☐ This is a Drill ☐ This is an Actual Event - Repeat - This is an Actual Event

2. This is \_\_\_\_\_, TVA Operations Sequoyah has **GENERAL EMERGENCY**  
Duty Specialist at (423) 751-1700. declared a

affecting: ☐ Unit 1 ☐ Unit 2 ☐ Both Unit 1 and Unit 2

3. EAL Designator(s): \_\_\_\_\_

4. Brief Description of the Event: \_\_\_\_\_

5. Radiological Conditions: (Check one under both Airborne and Liquid column.)

<u>Airborne Releases Offsite</u>	<u>Liquid Releases Offsite</u>
<input type="checkbox"/> Minor releases within federally approved limits <sup>1</sup>	<input type="checkbox"/> Minor releases within federally approved limits <sup>1</sup>
<input type="checkbox"/> Releases above federally approved limits <sup>1</sup>	<input type="checkbox"/> Releases above federally approved limits <sup>1</sup>
<input type="checkbox"/> Release information not known	<input type="checkbox"/> Release information not known
( <sup>1</sup> Tech Specs)	( <sup>1</sup> Tech Specs)

6. Event Declared: Time: \_\_\_\_\_ Date: \_\_\_\_\_

7. The Meteorological Conditions are: (Use 46 meter data from the Met Tower)

Wind Direction is FROM: \_\_\_\_\_ degrees Wind Speed: \_\_\_\_\_ m.p.h

8. Provide Protective Action Recommendation: (Check either 1 or 2, and mark wind direction.)

<input type="checkbox"/> Recommendation 1 ► EVACUATE LISTED SECTORS (2 mile Radius and 10 miles downwind) ► SHELTER all other non-listed sectors. ► CONSIDER issuance of Potassium Iodide in accordance with the State Plan.	WIND FROM ° (Mark)	<input type="checkbox"/> Recommendation 2 ► EVACUATE LISTED SECTORS (2 mile radius and 5 mile downwind) ► SHELTER all other non-listed sectors. ► CONSIDER issuance of Potassium Iodide in accordance with the State Plan.
A-1, B-1, C-1, D-1, C-2, -6, -7, -8, D-2, -3, -5, -6,	12 - 49	A-1, B-1, C-1, D-1, C-2, D-2
A-1, B-1, C-1, D-1, D-2, -3, -4, -5, -6	50 - 70	A-1, B-1, C-1, D-1, D-2
A-1, B-1, C-1, D-1, A-3, -4, D-2, -3, -4, -5	71 - 112	A-1, B-1, C-1, D-1, A-3, D-2
A-1, B-1, C-1, D-1, A-2, -3, -4, -5, -6, D-4,	113 - 146	A-1, B-1, C-1, D-1, A-2, A-3,
A-1, B-1, C-1, D-1, A-2, -3, -4, -5, -6, B-2,	147 - 173	A-1, B-1, C-1, D-1, A-2, A-3, B-2
A-1, B-1, C-1, D-1, A-2, -5, -6, B-2, -3, -4,	174 - 214	A-1, B-1, C-1, D-1, A-2, B-2,
A-1, B-1, C-1, D-1, B-2, -3, -4, -5, -6, -7, -8	215 - 258	A-1, B-1, C-1, D-1, B-2, B-5,
A-1, B-1, C-1, D-1, B-2, -3, -5, -6, -7, -8, C-2, -3, -4, -5, -6,	259 - 331	A-1, B-1, C-1, D-1, B-2, B-5, C-2
A-1, B-1, C-1, D-1, B-5, C-2, -3, -4, -5, -6, -7, -8	332 - 11	A-1, B-1, C-1, D-1, B-5, C-2

9. Please repeat the information you have received to ensure accuracy.

10. Time and Date this information was provided \_\_\_\_\_ / \_\_\_\_\_

**Action: When completed, telecopy this information.**

APPENDIX A Page 3 of 3

WATTS BAR

1. ☐ This is a Drill ☐ This is an Actual Event - Repeat - This is an Actual Event

2. This is \_\_\_\_\_, TVA Operations Watts Bar has declared a **GENERAL EMERGENCY**  
Duty Specialist at (423) 751-1700

3. EAL Designator(s): \_\_\_\_\_ affecting: ☐ Unit 1 ☐ Unit 2 ☐ Both Unit 1 and Unit 2

4. Brief Description of the Event: \_\_\_\_\_

5. Radiological Conditions: (Check one under both Airborne and Liquid column.)

<u>Airborne Releases Offsite</u>	<u>Liquid Releases Offsite</u>
<input type="checkbox"/> Minor releases within federally approved limits <sup>1</sup>	<input type="checkbox"/> Minor releases within federally approved limits <sup>1</sup>
<input type="checkbox"/> Releases above federally approved limits <sup>1</sup>	<input type="checkbox"/> Releases above federally approved limits <sup>1</sup>
<input type="checkbox"/> Release information not known ( <sup>1</sup> Tech Specs)	<input type="checkbox"/> Release information not known ( <sup>1</sup> Tech Specs)

6. Event Declared: \_\_\_\_\_ Time: \_\_\_\_\_ Date: \_\_\_\_\_

7. The Meteorological Conditions are: (Use 46 meter data from the Met Tower)

Wind Direction is FROM: \_\_\_\_\_ degrees Wind Speed: \_\_\_\_\_ m.p.h

8. Provide Protective Action Recommendation: (Check either 1 or 2, and mark wind direction.)

<input type="checkbox"/> Recommendation 1	WIND FROM ° (Mark)	<input type="checkbox"/> Recommendation 2
▶ EVACUATE LISTED SECTORS (2 mile Radius and 10 miles downwind)		▶ EVACUATE LISTED SECTORS (2 mile radius and 5 mile downwind)
▶ SHELTER all other non-listed sectors.		▶ SHELTER all other non-listed sectors.
▶ CONSIDER issuance of Potassium Iodide in accordance with the State Plan.		▶ CONSIDER issuance of Potassium Iodide in accordance with the State Plan.
A-1, B-1, C-1, D-1, C-7, -9, D-2, -4, -5, -6, -7, -8, -9	26-68	A-1, B-1, C-1, D-1, C-7, D-2, -4, -5
A-1, B-1, C-1, D-1, A-3, -4, D-2, -3, -4, -5, -6, -7, -8, -9	69-110	A-1, B-1, C-1, D-1, A-3, D-2, -4, -5
A-1, B-1, C-1, D-1, A-2, -3, -4, -5, -6, -7, D-2, -3, -5, -6	111-170	A-1, B-1, C-1, D-1, A-2, -3, D-2, -5
A-1, B-1, C-1, D-1, A-2, -3, -5, -6, -7, B-2, -3, -4, -5, C-2	171-230	A-1, B-1, C-1, D-1, A-2, -3, B-2, -4, C-2
A-1, B-1, C-1, D-1, B-2, -3, -4, -5, C-2, -3,	231-270	A-1, B-1, C-1, D-1, B-2, -4, C-2
A-1, B-1, C-1, D-1, B-2, -3, C-2, -3, -4, -5, -6, -11	271-325	A-1, B-1, C-1, D-1, B-2, C-2, -4, -5,
A-1, B-1, C-1, D-1, C-2, -4, -5, -6, -7, -8, -9, -10, -11, D-4, -9	326-25	A-1, B-1, C-1, D-1, C-2, -4, -5, -7, -8, D-4

9. Please repeat the information you have received to ensure accuracy.

10. Time and Date this information was provided \_\_\_\_\_ / \_\_\_\_\_

Action: When completed, telecopy this information.

APPENDIX B Page 1 of 1

FOLLOW-UP INFORMATION FORM  
GENERAL EMERGENCY

1. "This is a Real Emergency. This is a Real Emergency." ☐  
or  
"This is a Drill. This is a Drill." ☐

2. Time \_\_\_\_\_

3. The following significant changes in Plant Conditions have occurred.

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4. The following significant changes in Radiological Conditions have occurred. \_\_\_\_\_

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5. The following changes to Protective Action Recommendations have occurred.

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

7. Time information provided to State. \_\_\_\_\_

8. Name \_\_\_\_\_ Date \_\_\_\_\_

Note: When completed telecopy this Form to the State.

# TVA NUCLEAR CALL-IN SHEET

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

[illegible]

Tennessee Valley Authority	Title	CECC EPIP-8 REV. 24										
CENTRAL EMERGENCY CONTROL CENTER EMERGENCY PLAN IMPLEMENTING PROCEDURES	DOSE ASSESSMENT STAFF ACTIVITIES DURING NUCLEAR PLANT RADIOLOGICAL EMERGENCIES	Effective Date: <u>3/31/03</u>										
<p>WRITTEN BY: <u><i>Thomas F. Albini</i></u>      REVIEWED BY: <u><i>Daryl E. Pittman</i></u>      <u><i>3/25/03</i></u> Signature    Signature    Date</p> <p>PLAN EFFECTIVENESS DETERMINATION: <u><i>Thomas F. Albini</i></u>      <u><i>3/24/03</i></u> Signature    Date</p> <p style="text-align: center;"><b>CONCURRENCES</b></p> <table border="1"> <thead> <tr> <th>Concurrence Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <i>David Pond</i></td> <td><u><i>3/25/03</i></u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Emergency Preparedness <i>BK Marks</i></td> <td><u><i>3/25/03</i></u></td> </tr> <tr> <td><input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandler</i></td> <td><u><i>3/27/03</i></u></td> </tr> <tr> <td><input type="checkbox"/></td> <td>_____</td> </tr> </tbody> </table>			Concurrence Signature	Date	<input checked="" type="checkbox"/> Manager, EP Program Planning and Implementation <i>David Pond</i>	<u><i>3/25/03</i></u>	<input checked="" type="checkbox"/> Manager, Emergency Preparedness <i>BK Marks</i>	<u><i>3/25/03</i></u>	<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandler</i>	<u><i>3/27/03</i></u>	<input type="checkbox"/>	_____
Concurrence Signature	Date											
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<input checked="" type="checkbox"/> Manager, Radiological and Chemistry Services <i>Chandler</i>	<u><i>3/27/03</i></u>											
<input type="checkbox"/>	_____											

APPROVED BY: Mark J. Burzynski VP Eng & Tech Svcs 3/27/03  
Signature Title Organization Date

CECC-EPIP-8  
DOSE ASSESSMENT STAFF ACTIVITIES  
DURING NUCLEAR PLANT RADIOLOGICAL EMERGENCIES  
REVISION LOG

Rev. No.	Date	Revised Pages
0	3/22/88	All (Changed from IPD to EPIP)
1	11/18/88	2-7, Apps. A, B, C, & D
2	12/12/88	Appendix A
3	4/26/89	All
4	9/19/89	App. C
5	10/26/89	All
6	5/21/91	App. B, pgs. 1-4; Appendix C, pgs. 1-2; App. D, pg. 1
7	10/17/91	App. B, pgs. 2-4; App. C, pg. 1.
8	05/13/93	1-4; App. A; App. B, pg. 1, 3, & 4; and App. G; App. C deleted. All pages issued.
9	11/22/93	Pg. 4; App. B, pgs. 1&4; App. D changed to App. C; App. E changed to App. D; App. F changed to App. E; and App. G changed to App. F.
10	11/30/93	1, 3, 4; App. A, pg. 1; App. B, pgs. 1-2; App. C, pg. 1-5; App. D, pg. 1; App. E, pg. 1; App. F, pg. 1; App. G, pgs. 1-6.
11	06/24/94	App. B, pg. 1; App. D, pgs. 2-5; App. F; App. J added. All pages issued.
12	6/27/95	Pg. 1; App. A; App. B, p 3; App. C, p. 5; App. D, p. 2; App. G, pgs. 4 and 6
13	1/17/96	App. B, pg. 2, editorial changes, add table for BFN stack release; App. C, pgs. 1 & 3, Add new criteria for Type I and Type II releases; App. D, pgs. 2-5, add nonogram alignment checks
14	5/30/96	Pg. 3, App. A, App. B, App. C, App. D, App. F, App. G; annual review; ground level release tables and nomograms made generic to all three sites; all pages issued.
15	10/30/96	Pg. 3, App. B, and App. D; Add reference to App. I of CECC EPIP-7, remove deleted pages, make correction to Nomogram Alignment Check Table.
16	5/30/97	Editorial changes, update manual dose assessment methodology, update preliminary assessment table, revise river miles on tables in Appendix G, annual review. All pages issued.
17	8/8/97	Revise default river flow rate for BFN, revise responsibilities of Norris Lab, add water intake tables. All pages issued.

CECC-EPIP-8  
DOSE ASSESSMENT STAFF ACTIVITIES  
DURING NUCLEAR PLANT RADIOLOGICAL EMERGENCIES

Rev. No.	Date	REVISION LOG (Continued)	Revised Pages
<u>18</u>	<u>6/9/98</u> <del>6/4/98</del> <i>RR</i>	<u>Annual review. Organization title changes. In Appendix D clarify Type I and Type II formulas. Remove Tennessee River miles from tables. All pages issued.</u>	
<u>19</u>	<u>10/27/98</u>	<u>Correct reference to CECC EPIP-1 Appendix on Appendix J.</u>	
<u>20</u>	<u>5/20/99</u>	<u>Annual review. Editorial and clarification changes, revise public water use tables. All pages issued.</u>	
<u>21</u>	<u>9/8/00</u>	<u>Annual review. Editorial changes. All pages issued.</u>	
<u>22</u>	<u>3/30/01</u>	<u>Revised to incorporate the new source term methodology in the RED suite of codes revision</u>	
<u>23</u>	<u>11/22/02</u>	<u>Revised all pages to reflect human factor improvements in REP codes and manual. Included changes due to code revision necessary for H-3 project.</u>	
<u>24</u>	<u>3/31/03</u>	<u>Added sections to Appendix F to provide instructions for manual method of calculating TEDE and thyroid CDE doses at Site Boundary (0.62 miles). All pages issued.</u>	

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**DOSE ASSESSMENT STAFF ACTIVITIES DURING NUCLEAR PLANT RADIOLOGICAL EMERGENCIES**

**1.0 PURPOSE**

To guide Dose Assessment in obtaining necessary information, calculating dose rates and doses, and communicating assessment results used in responding to radiological emergencies at nuclear power plants.

**2.0 SCOPE**

This procedure applies to activities of Dose Assessment in actual and hypothetical radiological emergency situations. While the activities of the Dose Assessment staff are expected to follow this procedure, it is expected that circumstances may arise during an event which will void portions of this procedure. Therefore, this procedure is a guide for the operation of the Dose Assessment staff under the ideal conditions.

**3.0 STAFFING**

**3.1 Activation and Notification**

The Initial notification of an event comes from the Operations Duty Specialist via the Emergency Paging System (EPS) or manual callout. Additional Dose Assessor support is contacted in accordance with Appendix A. The Dose Assessor is a position required for the CECC to make Protective Action Recommendations and to meet minimum staffing levels.

Upon reporting to the CECC, perform initial activities in accordance with the checklist provided as **Appendix A**.

**3.2 Shift Change**

Shift change notification and transition and transfer of responsibilities should be conducted in accordance with the Dose Assessment Shift Change and Termination Checklist (Appendix B).

**3.3 Termination**

Termination of an event should include the following actions and follow the Dose Assessment Shift Change and Event Termination Checklist (Appendix B).

DOSE ASSESSMENT STAFF ACTIVITIES DURING NUCLEAR PLANT RADIOLOGICAL EMERGENCIES	CECC EPIP-8	Page 3 of 32 Revision 24
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#### **4.0 DOSE ASSESSOR INTERFACES**

##### **4.1 Radiological Assessment Manager / Coordinator (RAM/RAC)**

The Dose Assessor should interface directly with the Radiological Assessment Coordinator (RAC). In the absence of the RAC, communication is provided directly to the RAM. Requests for any special-case assessments should come to Dose Assessment through the RAC/RAM or be cleared by the RAC/RAM prior to their performance.

Dose Assessment is responsible for performing the offsite dose assessment activities of the CECC in order to determine Protective Action Recommendations using the appropriate appendix in CECC EPIP-1. Dose assessment results are also evaluated against criteria for declaration of Emergency Classification levels, and evaluations are communicated to the RAM/RAC.

Dose Assessment should provide results of all dose assessments and plume plots from FRED to the RAC/RAM, who will approve them and distribute them to CECC staffs. Initial dose assessments (those made at the start of an event or when the conditions have changed significantly as defined in this procedure) will receive the approval of the RAC/RAM and then are transmitted to the TSC and the State. Under most other conditions, the results are directly transmitted to the TSC and the State on the State Update form via computer spooling. However, if the computer spooling is unavailable, then the Dose Assessor shall prepare a State Update form manually as defined in EPIP-1. CECC Clerical staff have instructions for distribution.

Dose Assessment should provide to the RAC/RAM copies of plume plots from RED for ongoing releases or plots of estimated centerline location (if there is not a known release but potential exists for one to occur). This information should be transmitted by the RAC/RAM to the CECC, TSC, and State. Dose assessment will also support post event recovery efforts.

##### **4.2 Meteorologist (MET)**

The CECC Meteorologist is responsible for providing to Dose Assessment the real time and forecast meteorological data and associated advice on atmospheric dispersion and transport. If a meteorologist is not initially available for response to the CECC, support can be obtained from Muscle Shoals. Telephone and pager numbers for the Muscle Shoals response personnel are available in the REND.

Meteorological data is provided to the CECC by computer inputs and by the CECC meteorologist. In the event of a monitored airborne release, the 15-minute meteorological data is automatically accessed by the RED and FRED codes. This data should be verified against the distributed meteorological data or by the meteorologist. The meteorologist is also available to convert flow rates to exit velocities for use in the codes. The meteorologists will also provide forecast information for use in the FRED code.

##### **4.3 Environs Assessor/Field Coordinator**

Dose Assessors provide plume plots to the CECC Environs Assessor and to the Field Coordinator at the Radiological Monitoring Control Center (RMCC) via the RAC. These plume plots are used to assist with decisions on field team deployments. Real time plume plots from the RED code are to be distributed to the EA/FC and the State for that purpose.

Field data is also shared to assist with comparison of dose projections with field measurements. This comparison can assist with evaluations if field teams are at maximum centerline locations, or if reported plant release rates coincide with actual field measurements.

In the event of an unmonitored release from a site, field team data can be used in the BRED code to assist with determination of a release rate.

#### **4.4 Core Damage Assessors**

The CECC Core Damage group (in Plant Assessment) is responsible for supplying Dose Assessment with projections of potential, anticipated, and/or worst-case release rates and pathways.

#### **4.5 Technical Support Center (TSC)**

The TSC is a source of information for radioactivity release rates, pathways, flow rates, and information on plant status and prognosis. The primary point of contact is TSC Chemistry. Release information is also available via the Integrated Computer System (ISC) using the CECC computers.

#### **4.6 River Operations**

River Operations may assist in providing Dose Assessment information on water dispersion characteristics for releases to the river. This information may be used in running the WATERDOSE code, or for use of the manual methodology if the dose code is unavailable.

#### **4.7 State (Radiological)**

Dose Assessment shall ensure that communication with the State Dose Assessment Team is established and maintained. The State should be given hourly updates, as a minimum. These updates should include discussions of all technical information relative to dose assessments being made (incoming release rates, assumptions used, problems with information flow). The State should also be contacted if the conditions have changed significantly as defined in this procedure. DO NOT discuss protective action recommendations with the State.

### **5.0 PERFORMING DOSE ASSESSMENTS**

#### **5.1 Data Verification**

All dose assessment results (computer generated or hand calculated) involving data input will be verified by a second party verifier. The verifier may be a Dose Assessor or the RAM/RAC. The verifier will verify the accuracy and appropriateness of data input and reasonableness of the results. Both preparer and verifier will initial and date the results page of the assessment (e.g., State Update Form for FRED assessments).

#### **5.2 Preliminary Assessments**

Dose Assessors should provide results of all preliminary assessments to the RAC/RAM. Preliminary Assessments are provided as part of a FRED run. Preliminary assessments will be performed at the start of an event or when the conditions have changed significantly as defined in this procedure.

### **5.3 Criteria for a Significant Change in Conditions**

Criteria for a significant change which will require a new dose assessment run are:

- the release type / path has changed,
- the release rates have changed by a factor of 10
- the stability class has changed by 2 classes,
- or the wind speed has changed by a factor of 2.

### **5.4 FRED or RED Assessments - Collection of Data**

Gather information as provided on Appendix C. Sources of information may include the Technical Support Center (Chemistry), ICS, CECC Meteorologist or CECC Core Damage Assessors. Refer to Appendix C for instructions on running the dose codes.

### **5.5 Preparing a Protective Action Recommendation (PAR)**

TVA must satisfy regulatory requirements to provide State Authorities a PAR within 15 minutes of the declaration of a General Emergency. Therefore, Dose Assessors should anticipate and initiate development of a PAR to allow ample time for review, approval and transmittal to State Authorities.

A Protective Action Recommendation for airborne releases is determined based upon results of a FRED run. If the FRED program is unavailable, then the manual methodology should be utilized as provided in this procedure. A PAR form contained in CECC EPIP-1 should be completed, with attention to identification of affected sectors as page 2 of that document..

Dose Assessment should provide technical guidance to the RAC/RAM in the preparation of protective action recommendations based on dose assessments. The RAC is responsible for written preparation of recommendations to the RAM.

### **5.6 Changes in Conditions for a PAR**

Changes to a PAR must be communicated to the State by the CECC Director within 15 minutes of determination. Criteria for a changes which will require evaluation a new PAR are:

- the release type / path has changed,
- the release rates have changed by a factor of 10
- the stability class has changed by 2 classes,
- or the wind speed has changed by a factor of 2.
- a wind direction change resulting in a change of an affected sector

### **5.7 BRED Assessment - Back Calculation of Release Rate from Measured Field Data**

Measured field data (consisting of dose rates in mrem/hr and I-131/H-3 concentrations) are assessed in several ways. If there is a monitored release ongoing, the field data are compared to the results of the most applicable data produced by the RED or FRED computer models.

However, in cases where the release is unknown or questionable, the field data are then input into the BRED computer model to determine the applicable release rates. These calculated release rates are then input into the RED/FRED codes, as applicable, which can be used to perform dose assessments and any applicable Protective Action Recommendation (PAR).

**5.8 Comparison of Measured Field Data to Dose Projections**

Field data is compared with dose projections to assist with evaluations if field teams are at maximum centerline locations, or if reported plant release rates coincide with actual field measurements. Appendix G is provided as a reference to perform comparisons.

**5.9 WATERDOSE Assessments**

Liquid releases to the River are assessed using the WATER DOSE code as provided on Appendix H. If the WATER DOSE code is unavailable, a manual methodology is provided as Appendix I.

**5.10 Manual Methodologies for Dose Assessments**

In the event that the FRED, RED or WATERDOSE computer codes are unavailable, instructions are provided in the Appendixes of this procedure for manual calculation methods. In consideration that the computer programs also normally spool data outputs directly to the State, the Dose Assessor will need to ensure that the applicable pages of the State Update Form, contained in CECC EPIP-1, are also manually completed and transmitted accordingly.

**6.0 REFERENCES**

FRED User's Manual  
RED/FRED/BRED Documentation  
FRED User's Manual  
WATERDOSE User's Manual  
BRED User's Manual  
Model Comparison  
REP CODE Revision 2, Specifications and Documentation, August 2002, L61 020814 800

**7.0 ABBREVIATIONS AND DEFINITIONS**

CECC - Central Emergency Control Center  
CTM - Containment building  
SGTR (above) - Steam Generator Tube Rupture above the steam generator water level  
SGTR (below) - Steam Generator Tube Rupture below the steam generator water level  
MSLB - Main Steam Line Break  
TSC - Technical Support Center  
EPS - Emergency Paging System  
RED - Radiological Emergency Dose Code  
RO - River Operations  
FRED - Forecast Radiological Emergency Dose Code  
BRED - Back-calculation Radiological Emergency Dose Code  
TRM - Tennessee River Mile  
ICS - Integrated Computer System  
WGDT - Waste Gas Decay Tank (as in rupture event)  
RAM/RAC -Radiological Assessment Manager or Radiological Assessment Coordinator

APPENDIX A

Dose Assessor Initial Reporting Checklist

(steps do not need to be performed in sequential order)

1. **SIGN IN** on the CECC staffing board and don your CECC position tag.
2. **START** logkeeping of key activities and notifications in the position logbook.
3. **ENSURE** that the following support staffs are notified and/or staffed. Refer to the REND call out list for contact information.
  - Second Dose Assessor, if needed.
  - Muscle Shoals Meteorologist (if serving as CECC pager duty person).
4. **CONFIRM** position notebook procedures match revision levels in controlled copies.
5. **ESTABLISH** contact with the TSC Chemistry (programmed on phone and in REND section B). Ascertain if a release has been, or is occurring. **IF YES, INITIATE** a dose assessment as noted below.
6. Perform preliminary assessments and dose projections.
7. **ESTABLISH** initial contact with the State Radiological Dose Assessment staff (programmed on phone and in REND section B).
8. **OBTAIN** a briefing from the RAC/RAM and **INFORM** the RAC/RAM when the activities above are completed. Report/request if a radiological release has been, or is occurring.

**NOTES:** **COMPARE** dose assessment results against the levels for the declared REP class and advise the RAC/RAM to advise the TSC if an upgrade is indicated.

For Preliminary Assessments and Dose Projections use the **FRED** Code (Appendix C and D).

For Plume Plots to track actual releases in current time, use the **RED** Code (Appendix C and D).

When the plant release rate is unmonitored or questionable, use the **BRED** code to arrive at a plant release rate based upon Field Team data. (Appendix E).

For releases to the River, use the **WATERDOSE** Code (Appendix H)

**If computer problems are encountered, immediately contact Computer Support**

If the FRED computer code is inoperative, use the **MANUAL METHODOLOGY** to assess airborne radioactivity releases (Appendix F).

If the WATERDOSE computer code is inoperative, use the **MANUAL METHODOLOGY** to assess liquid releases to the river (Appendix I and J).

APPENDIX B

Dose Assessor Shift Change and Termination Checklist

1. The following should be discussed between staff for Shift Turnover.

- Current release data and projections.
- Current met data and projections.
- Current plant status and projections.
- Current environs data and projections.
- Pertinent historical data/plant conditions
- Status of any Protective Action Recommendations made and the rationale for these
- Status of any (incoming or outgoing) unfulfilled requests for information.
- Dose methodologies being used.
- Identification of problems in response capability.
- Identification of contacts at the TSC, State, Core Damage staff and RO
- Time for next periodic update to the State
- Time for next periodic update of the RED plume plot
- Identify individuals external to CECC who were activated or placed on standby

2. Transfer of Shift Change Responsibility

- Obtain approval from the RAC for the transfer of responsibility
- The on duty Dose Assessment Staff should remain available or at least respond in case transfer problems are identified

3. Termination

- Log off CECC computer system/turn off plotters.
- Notify all on-call staff of event termination, such as:
  - Meteorologist (if staffed in Muscle Shoals)
  - Additional Dose Assessment staff on standby
  - River Operations
- Collect and turn in all records to the EP staff

FRED / RED Data Inputs**NOTE:** The source for this information may be the site Technical Support Center or from ICS.

1. Plant: ☐ BFN ☐ SQN ☐ WBN
2. Meteorological data will be: ☐ ACTUAL or ☐ EXERCISE (confirm with drill controller).
3. Release start time: \_\_\_\_\_ ☐ Eastern ☐ Central
4. Elapsed Time from reactor shutdown  
to start of release: \_\_\_\_\_ (hours) (enter 0 if Rx under power)
5. Release Vent Type (this is used by the code to calculate effective plume height):
- |                                      |   |
|--------------------------------------|---|
| <u>SQN/WBN</u>                       | <u>BFN</u>  |
| <input type="checkbox"/> Shield Bldg | <input type="checkbox"/> Stack                            |
| <input type="checkbox"/> Near ground | <input type="checkbox"/> Radwaste Zone (of Rx Bldg)       |
|                                      | <input type="checkbox"/> Refueling Bldg zone (of Rx Bldg) |
|                                      | <input type="checkbox"/> Reactor Bldg zone (of Rx Bldg)   |
|                                      | <input type="checkbox"/> Turbine Bldg zone (of Rx Bldg)   |
|                                      | <input type="checkbox"/> Near ground                      |
6. Effluent flow rate (exit speed) (if measured and available): \_\_\_\_\_ cfm.

**NOTE:** Consult with the meteorologist as to whether the default Exit Velocity based on this flow rate should be over-ridden. Code defaults can be used for conservatism or if flow data is unavailable.

## 7. Release Type:

- |  |                                      |   |
|--|--------------------------------------|---|
| <input type="checkbox"/> RCS           | <input type="checkbox"/> Core Damage | <input type="checkbox"/> User Specified |
| <input type="checkbox"/> Gap (default) | <input type="checkbox"/> Fuel Melt   | (for noble gas and Tritium only)        |

**NOTE:** Initially, a GAP Release Type should be used unless otherwise specified by the Core Damage Assessment team. Alternately, particulate-to-I<sup>131</sup> field team air concentration data can be used as follows:

Field Team Data Particulate microCi/cc = Ratio  
Field Team Data Iodine<sup>131</sup> microCi/cc

Ratio = Release Type:	<u>Gap</u>	<u>Core Damage</u>	<u>Fuel Melt</u>
	≥ 0.18	≥ 2.0	≥ 3.5



## Appendix C

Page 2 of 2

FRED / RED Data InputsFRED  
RED  
Data Inputs

## 8. Release Path:

SQN/WBN

- ☐ Filtered via containment (CTM)  
☐ Unfiltered via containment (CTM)  
☐ SGTR with rupture located **BELOW** water level  
☐ Steam Generator Tube Rupture with rupture located **ABOVE** water level  
☐ Turbine Bldg  
☐ Reactor Bldg  
☐ Auxiliary Bldg.

BFN

- ☐ Stack (filtered) ☐ Turbine Bldg, Reactor Bldg  
☐ Stack (unfiltered) ☐ Main Steam Line Break (MSLB)

## 9. Release rates:

Basis for rates: ☐ Monitor reading ☐ Plant personnel ☐ BRED estimate\_\_\_\_\_  $\mu\text{Ci/s}$  Noble Gas\_\_\_\_\_  $\mu\text{Ci/s}$  I-131 (pre-treatment value only, if available)\_\_\_\_\_  $\mu\text{Ci/s}$  Total Particulate (pre-treatment value only, if available)\_\_\_\_\_  $\mu\text{Ci/s}$  H-3 (if applicable see note below)**NOTE:**

- For a TPBAR handling accident, the H-3 release can be estimated as:

$$\text{H-3 Release Rate} \text{ _____} = \frac{\text{_____ } \mu\text{Ci/cc H-3} \times \text{_____ cfm} \times 28320 \text{ cc/cf}}{60 \text{ min/sec}}$$

$$\{ \text{H-3 release } (\mu\text{Ci/s}) = \# \mu\text{Ci/cc H-3} \times \text{building exhaust flow rate (cfm)} \times 28320 \text{ cc/cf} \times 1/60 \text{ min/s} \}$$

- For a WGD T Rupture accident, the default H-3 release is 2500 Ci over one hr or 6.94E+05  $\mu\text{Ci/s}$  for 1 hr

## Appendix D

Page 1 of 2

FRED  
RED  
Code Runs

## FRED or RED Assessment of Airborne Releases

1. **DOUBLE CLICK** on the "CECC VAX" icon if the VAX User Window is not displayed on computer screen. Depress **[RETURN]** until prompted for the user name.
2. **ENTER** user name and password: ☐ **RED** and CECC or ☐ **FRED** and CECC
3. **FOLLOW** computer prompts to begin or exit program.

**NOTE:** TYPE CTRL Z any time to exit or re-start program.

When executing the RED code you will be asked whether this is a "new run." **ANSWER "Y"** and **ENTER "NEW RUN,"** unless you desire to modify or append to a current run.

4. **INPUT** data as collected on Appendix C.

For a user-specified release (for noble gas and/or tritium releases only), **ENTER** the nuclide number below (as applicable) and the associated nuclide-specific release rates.

Nuclide #	Nuclide	Nuclide #	Nuclide
1	H-3	28	XE-131M
6	KR-85	29	XE-133
7	KR-85M	30	XE-133M
8	KR-87	31	XE-135
9	KR-88	32	XE-138

5. **CONFIRM** whether the release rate data is correct, (Y/N). Edit as necessary.
6. **CONFIRM** whether the calculated release rate data is correct, (Y/N). Edit as necessary.
7. **RUN** the code for the expected event duration:
  - For FRED Preliminary Assessments use 1 hour;
  - For FRED Dose Projections use a 4-hour duration unless known otherwise.
  - For RED assessments run once per 15-min during ongoing releases.

FRED or RED Assessment of Airborne Releases

8. **OBTAIN** code outputs by as follows:
  - a. **ANSWER** "Y" to the prompt to "Print dose charts or plume plots."
  - b. **SELECT** State Update Form (SUF) and plume plot as minimum outputs
  - c. **SELECT** scale to be used:  
[1] for 10 mile, [2] for 50 mile, [3] to exit code or go to next time segment)
  - d. For plume plot, **CLICK** print button at bottom of screen to perform a screen print of plot. Be sure that the pop-up dialog box has the Graphic Image set to "Swap Black/White."
  - e. For Preliminary Assessments, **OBTAIN** the Protective Action Guide (PAG) release rates from the FRED output and the actual/projected release rates from the State Update Form.
  - f. The Preparer and Verifier shall **INITIAL** and **DATE** the results.
9. **COMPARE** the declared REP class with that indicated in the FRED output. Notify the RAC/RAM (to advise the TSC) of the need for REP class changes based on radiological conditions.
10. **GIVE** PAG and actual/projected release rates to the Board Writer.
11. **GIVE** the FRED results (SUF, PAG Release Rates, plume plot, and REP class information) to the RAC for distribution. (The SUF may be sent directly through the computer to the State and the TSC.)
12. At the request of the RAC/RAM, **PREPARE** a PAR using the CECC Protective Action Logic Diagram and the PAR form found in EPIP-7 and give to the RAM with the results of the FRED run.
13. **REQUEST** that the RAC distribute the SUF, and any plume plots to all standard distribution locations, via CECC Clerical instructions.
14. Preferably once every 15-min (at least once per hour) during an actual release,
  - a. **ENTER** the release data into the RED code for use in tracking the plume
  - b. **COMPARE** the estimated impacts to measured field data.
  - c. **GIVE** the results (plume plot only) to the RAC for distribution to the CECC, the State, and the TSC.
15. **TYPE CTRL Z** any time to exit or re-start program.

Appendix E Page 1 of 2  
BRED Evaluation of Airborne Field Data

1. Log on to BRED. **DOUBLE CLICK** on the "CECC VAX" icon. **PRESS** return until prompted for username. **ENTER** username (BRED) and password (CECC).
2. **OBTAIN** the following field data from Environs Assessment.

**NOTE:** As a minimum, only need one of the following measurements:

Dose Rate **OR** Iodine-131 **OR** Tritium (H-3)

Distance (miles)	Direction (sector)	Time Taken	Dose Rate mrem/hr (1 meter w/c)

Iodine-131 $\mu\text{Ci/cc}$	$^3\text{H}$ Concentration $\mu\text{Ci/cc}$

3. Elapsed Time from reactor shutdown to time of field measurement: \_\_\_\_\_ (hours) (enter 0 if Rx under power)

4. **DETERMINE** the Release Path:

**SGN/WBN**

- ☐ Filtered via containment (CTM)
- ☐ Unfiltered via containment (CTM)
- ☐ SGTR with rupture located **BELOW** water level
- ☐ Steam Generator Tube Rupture with rupture located **ABOVE** water level
- ☐ Turbine Bldg
- ☐ Reactor Bldg
- ☐ Auxiliary Bldg.

**BFN**

- ☐ Stack (filtered)
- ☐ Stack (unfiltered)
- ☐ Turbine Bldg, Reactor Bldg
- ☐ Main Steam Line Break (MSLB)

5. **DETERMINE** the Release Type: ☐ RCS ☐ Core Damage  
☐ Gap (**default**) ☐ Fuel Melt

**NOTE:** Initially, a GAP Release Type should be used unless otherwise specified by the Core Damage Assessment team. Alternately, particulate-to-I<sup>131</sup> field team air concentration data can be used as follows:

Field Team Data Particulate microCi/cc = Ratio  
Field Team Data Iodine<sup>131</sup> microCi/cc

	<u>Gap</u>	<u>Core Damage</u>	<u>Fuel Melt</u>
Ratio = Release Type:	≥ 0.18	≥ 2.0	≥ 3.5

BRED Evaluation of Airborne Field Data

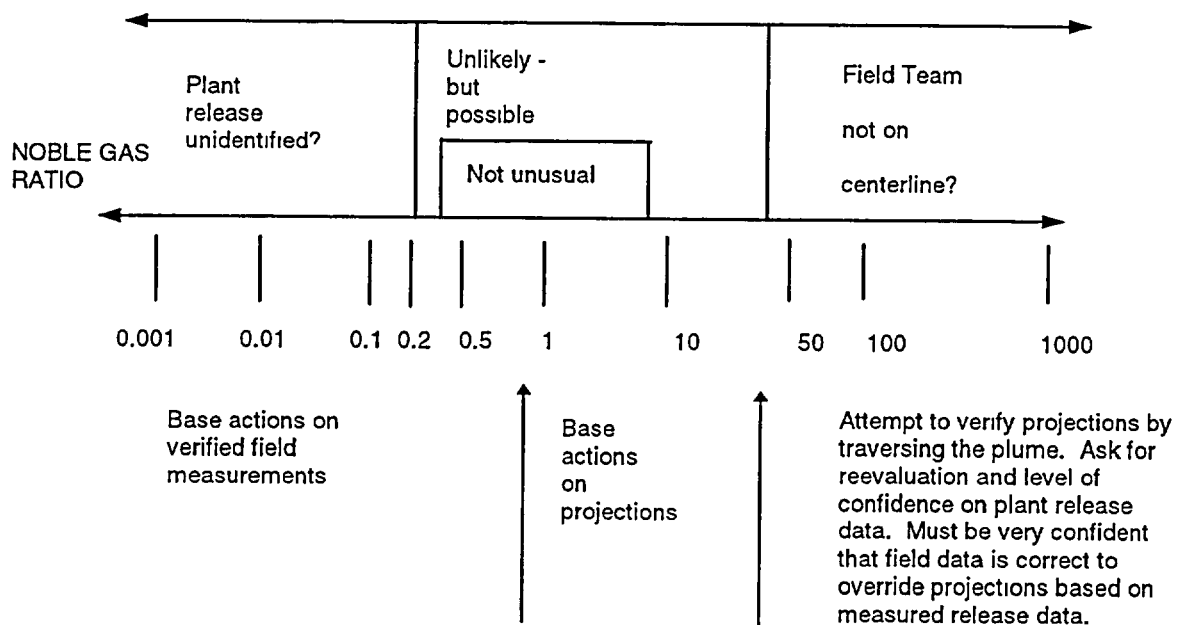
6. **RUN** the BRED computer model and follow prompts using the information from sections 2-5. **TYPE CTRL Z** any time to exit or re-start program.
7. **RECORD** the printed Release Rate output (as applicable) and **INPUT** into the **FRED** code.

Noble Gas ( $\mu\text{Ci/s}$ )	Iodine 131 (pre-treatment) $\mu\text{Ci/s}$	Tritium ( $^3\text{H}$ ) $\mu\text{Ci/s}$

8. **COMPARE** the new FRED run dose rate output to the previous RED/FRED computer model by **CALCULATING** a data ratio as follows:

FRED or RED Centerline Dose Rate *divided by* the FIELD DATA Centerline Dose Rate

\_\_\_\_\_ divided by \_\_\_\_\_ = \_\_\_\_\_ RATIO



9. **PROVIDE** feedback to the Environs Assessor and RAC/RAM. **UPDATE** dose projections as necessary and give the results to the RAC for use in preparing Protective Action Recommendations (PAR), or prepare a PAR in accordance with CECC EPIP-1.

\*Appendix F Page 1 of 8  
Manual Method for Assessing Airborne ReleasesMANUAL AIR  
SB TEDE PAG

## A. Calculating TEDE PAG Release Rate at SITE BOUNDARY (0.62 miles)

1. DETERMINE: Plant:
- ☐
- BFN
- ☐
- SQN
- ☐
- WBN

Wind Speed: \_\_\_\_\_ (m/s)

Stability Class: (circle) A B C D E F G

Release Type: ☐ RCS ☐ Core Damage ☐ User Specified  
☐ Gap (default) ☐ Fuel Melt (for noble gas and Tritium only)Release Path: SQN/WBN

- ☐
- Filtered via CTM
- 
- ☐
- Unfiltered via CTM
- 
- ☐
- SGTR with rupture
- BELOW**
- water
- 
- ☐
- SGTR with rupture
- ABOVE**
- water
- 
- ☐
- Turbine, Reactor, Auxiliary Building

BFN

- ☐
- filtered via stack
- 
- ☐
- unfiltered via stack
- 
- ☐
- Turbine, Reactor Bldg
- 
- ☐
- Main Steam Line Break

2. CIRCLE the TEDE PAG FACTOR (
- $\mu\text{Ci}/\text{m}$
- ) below, based on the stability class and release level.

NOTE: USE ground level for all cases except for BFN stack.

	A	B	C	D	E	F	G
Ground	1.7E+09	4.8E+08	2.2E+08	1.1E+08	7.4E+07	4.9E+07	2.9E+07
Stack	1.8E+09	9.1E+08	9.1E+08	8.3E+08	8.3E+08	8.0E+08	9.1E+08

3. CIRCLE the appropriate TEDE Ratio below, based on release type/path:

TEDE Ratio (for 0.62 mi)	BWR RCS	PWR RCS	Gap	Core Damage	Fuel Melt	User Spec
Stack (unfiltered)	2.0	N/A	1.8	1.3	2.0	1.0
Stack (filtered)	1.9	N/A	1.0	1.0	1.0	1.0
CTM (unfiltered) or SGTR (below)	N/A	7.4	9.5	5.3	11	1.0
CTM (filtered)	N/A	3.7	1.0	0.9	1.0	1.0
SGTR (above water)	N/A	95	221	111	263	1.0
MSLB (BFN)	8.1	N/A	84	44	100	1.0
Turbine, Reactor or Aux Bldg	4.8	17	32	16	37	1.0

4. CALCULATE the TEDE PAG Release Rate (0.62 mi) as follows:

$$\frac{\text{TEDE PAG FACTOR}}{(\mu\text{Ci}/\text{m, item 2})} \times \frac{\text{wind speed}}{(\text{m/s, item 1})} / \frac{\text{TEDE Ratio}}{(\text{item 3})} = \frac{\text{TEDE NGPAG Release Rate}}{\text{SB 0.62 mi } (\mu\text{Ci}/\text{s})}$$

\*Revision

\*Appendix F Page 2 of 8  
Manual Method for Assessing Airborne ReleasesMANUAL AIR  
SB TEDE PAG

5. OBTAIN the actual/projected Noble Gas Release Rate \_\_\_\_\_  $\mu\text{Ci/s}$ .
6. IF noble gas release rate (item 5)  $\geq$  TEDE PAG Release Rate (item 4),  
THEN radiological conditions indicate a **General Emergency**.

For Tritium Accidents (e.g., TPBAR handling or WGDT rupture),

7. CIRCLE the Tritium PAG FACTOR ( $\mu\text{Ci/m}$ ) below, based on the stability class.

A	B	C	D	E	F	G
4.0E+09	8.7E+08	2.9E+08	1.0E+08	5.9E+07	3.1E+07	1.4E+07

8. CALCULATE the Tritium PAG Release Rate as follows:

$$\frac{\text{Tritium PAG FACTOR}}{(\mu\text{Ci/m, item 7})} \times \frac{\text{wind speed}}{(\text{m/s item 1})} = \frac{\text{TEDE Tritium PAG Release Rate}}{\text{SB 0.62 MI } (\mu\text{Ci/s})}$$

9. OBTAIN the actual/projected Tritium Release Rate (see below) \_\_\_\_\_  $\mu\text{Ci/s}$ .

**NOTE:**

- For a TPBAR handling accident, the H-3 release can be estimated as:

$$\text{H-3 Release Rate} = \frac{\text{_____ } \mu\text{Ci/cc H-3} \times \text{_____ cfm} \times 28320 \text{ cc/cf}}{60 \text{ min/sec}}$$

$$\{ \text{H-3 release } (\mu\text{Ci/s}) = \# \mu\text{Ci/cc H-3} \times \text{building exhaust flow rate (cfm)} \times 28320 \text{ cc/cf} \times 1/60 \text{ min/s} \}$$

- For a WGDT Rupture accident, the default H-3 release is 2500 Ci over one hr or  $6.94\text{E}+05 \mu\text{Ci/s}$  for 1 hr

10. IF tritium release rate (item 9)  $\geq$  TEDE PAG Release Rate (item 8),  
THEN radiological conditions indicate a **General Emergency**.
11. IF tritium accident also involves noble gases, THEN perform the following calculation:

$$\frac{\text{NG Release Rate}}{\text{TEDE NG PAG Release Rate}} + \frac{\text{Tritium Release Rate}}{\text{TEDE Tritium PAG Release Rate}}$$
$$\frac{\text{(item 5)}}{\text{(item 4)}} + \frac{\text{(item 9)}}{\text{(item 8)}} = \text{Ratio}$$

12. IF the value in item 11  $\geq 1.0$ , THEN radiological conditions indicate a **General Emergency**.

\*Revision

\*Appendix F      Page 3 of 8  
Manual Method for Assessing Airborne Releases

MANUAL AIR  
SB THYROID  
CDE PAG**B.    Calculating THYROID CDE PAG Release Rate at SITE BOUNDARY (0.62 MILES)**

1.    **USE** the data from section A.1
2.    **CIRCLE** the **CDE PAG FACTOR** ( $\mu\text{Ci}/\text{m}$ ), based on the stability class and release level.

**NOTE:**    USE ground level for all cases except for BFN stack.

	A	B	C	D	E	F	G
Ground	4.1E+05	8.6E+04	3.0E+04	1.0E+04	6.0E+03	3.1E+03	1.4E+03
Stack	4.1E+05	2.3E+05	3.7E+05	6.5E+05	1.4E+06	2.1E+07	4.9E+11

3.    **CALCULATE** the CDE PAG Release Rate as follows:

$$\frac{\text{CDE PAG FACTOR}}{(\mu\text{Ci}/\text{m, item 2})} \times \frac{\text{wind speed}}{(\text{m/s})} = \boxed{\text{CDE PAG Release Rate SB 0.62 mi } (\mu\text{Ci/s})}$$

4. a.    If known, **RECORD** the actual/projected I-131 release rate \_\_\_\_\_  $\mu\text{Ci/s}$  and go to Step 5.

If unknown, **CIRCLE** the I-131 to NG ratio below, based on release type and path and continue with step 4 b.

<u>I-131 to Noble Gas Ratio</u>				
	<u>RCS</u>	<u>Gap</u>	<u>Core Damage</u>	<u>Fuel Melt</u>
CTM filtered	1.7E-06	3.0E-05	1.2E-05	2.2E-05
Stack filtered	4.6E-07	3.0E-05	1.2E-05	2.2E-05
CTM (unfiltered) or SGTR (below)	1.7E-04	3.0E-03	1.2E-03	2.2E-03
Stack (unfiltered)	4.6E-05	3.0E-03	1.2E-03	2.2E-03
TB, AuxB, RxB	5.8E-04	1.0E-02	4.1E-03	7.7E-03
SGTR (above)	4.2E-03	8.0E-02	3.0E-02	5.5E-02
MSLB (BFN)	4.6E-04	3.0E-02	1.2E-02	2.2E-02

- 4.b.    **CALCULATE** actual/projected iodine-131 release rate as follows:

$$\frac{\text{Actual/Projected NG release rate}}{(\text{item A.5})} \times \frac{\text{I-131 to NG ratio}}{(\text{item 4a})} = \frac{\text{Actual/proj. I-131 release rate}}{(\mu\text{Ci/s})}$$

5.    **IF** I-131 release rate (item 4a or b)  $\geq$  CDE PAG Release Rate (item 3),  
**THEN** radiological conditions indicate a **General Emergency**.

\*Revision



Appendix F Page 4 of 8  
Manual Method for Assessing Airborne ReleasesMANUAL AIR  
SB TEDE RATE

## C. Calculating TEDE Dose Rate at SITE BOUNDARY (0.62 miles)

1. DETERMINE: Plant: ☐ BFN ☐ SQN ☐ WBN

Wind Speed: \_\_\_\_\_ (m/s)

Stability Class: (circle) A B C D E F G

Release Type: ☐ RCS ☐ Core Damage ☐ User Specified (for noble gas and Tritium only)  
☐ Gap (default) ☐ Fuel MeltRelease Path: SQN/WBN BFN

- ☐ Filtered via CTM ☐ filtered via stack  
☐ Unfiltered via CTM ☐ unfiltered via stack  
☐ SGTR with rupture **BELOW** water ☐ Turbine, Reactor Bldg  
☐ SGTR with rupture **ABOVE** water ☐ Main Steam Line Break  
☐ Turbine, Reactor, Auxiliary Building

Noble Gas Release Rate : \_\_\_\_\_ ( $\mu\text{Ci/s}$ )2. CIRCLE the TEDE FACTOR (rem/h per  $\mu\text{Ci/m}$ ) below, based on the stability class and release level.

NOTE: USE ground level for all cases except for BFN stack.

	A	B	C	D	E	F	G
Ground	6.0E-10	2.1E-09	4.6E-09	9.5E-09	1.4E-08	2.1E-08	3.5E-08
Stack	5.5E-10	1.1E-09	1.1E-09	1.2E-09	1.2E-09	1.3E-09	1.1E-09

3. CIRCLE the appropriate TEDE Ratio below, based on release type/path:

## TEDE Ratio (at 0.62 mi)

	BWR RCS	PWR RCS	Core GAP	Fuel Damage	User Melt	Spec
Stack (unfiltered)	2.0	N/A	1.8	1.3	2.0	1.0
Stack (filtered)	1.9	N/A	1.0	1.0	1.0	1.0
CTM (unfiltered) or SGTR (below)	N/A	7.4	9	5.3	11	1.0
CTM (filtered)	N/A	3.7	1.0	0.9	1.0	1.0
SGTR (above water)	N/A	95	221	111	263	1.0
MSLB (BFN)	7.4	N/A	84	44	100	1.0
TB, RxB, AB	4.4	17	32	16	37	1.0

4. CALCULATE the TEDE Dose as follows:

$$\frac{\text{NG release rate } (\mu\text{Ci/s})}{\text{(item 1)}} \times \frac{\text{TEDE FACTOR}}{\text{(item 2)}} \times \frac{\text{TEDE Ratio}}{\text{(item 3)}} \times \frac{\text{wind sp. (m/s)}}{\text{(item 1)}} = \frac{\text{TEDE (rem/h)}}{\text{0.62 mile}}$$

For Tritium Accidents (e.g., TPBAR handling or WGDT rupture),

5. CIRCLE the Tritium TEDE FACTOR (rem/h per  $\mu\text{Ci/m}$ ) below, based on the stability class.

A	B	C	D	E	F	G
2.5E-10	1.2E-09	3.5E-09	1.0E-08	1.7E-08	3.3E-08	7.0E-08

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Manual Method for Assessing Airborne ReleasesMANUAL AIR  
5 mi TEDE RATE  
5 mi THY CDE RATE

6. CALCULATE the Tritium TEDE as follows:

$$\frac{\text{Tritium Release Rate*}}{(\mu\text{Ci/s})} \times \frac{\text{Tritium TEDE FACTOR}}{(\text{item 5})} \div \frac{\text{wind speed}}{(\text{m/s})} = \frac{\text{Tritium TEDE}}{(\text{rem/h})}$$

(item 1)

## \*NOTE:

- For a TPBAR handling accident, the H-3 release can be estimated as:

$$\text{H-3 Release Rate} = \frac{\mu\text{Ci/cc H-3}}{60 \text{ min/sec}} \times \text{cfm} \times 28320 \text{ cc/cf}$$

$$\{ \text{H-3 release } (\mu\text{Ci/s}) = \# \mu\text{Ci/cc H-3} \times \text{building exhaust flow rate (cfm)} \times 28320 \text{ cc/cf} \times 1/60 \text{ min/s} \}$$

- For a WGD T Rupture accident, the default H-3 release is 2500 Ci over one hr or 6.94E+05  $\mu\text{Ci/s}$  for 1 hr

7. IF tritium accident also involves noble gases, THEN CALCULATE Total TEDE rate as follows:

$$\text{TEDE (rem/h)} + \text{Tritium TEDE (rem/h)} = \text{Total TEDE (rem/h)}$$

0.62 mile

## D. Calculating SB THYROID CDE Dose Rate

1. CIRCLE the Thyroid CDE FACTOR (rem/h per
- $\mu\text{Ci/m}$
- ), based on the stability class and release level.

NOTE: USE ground level for all cases except for BFN stack.

	A	B	C	D	E	F	G
Ground	1.2E-05	5.8E-05	1.7E-04	4.8E-04	8.3E-04	1.6E-03	3.5E-03
Stack	1.2E-05	2.2E-05	1.4E-05	7.7E-06	3.5E-06	2.3E-07	1.0E-11

- 2 a. If known, RECORD the I-131 release rate \_\_\_\_\_
- $\mu\text{Ci/s}$
- and go to Step 3.

If unknown, CIRCLE the I-131 to NG ratio below, based on release type and path and continue with step 2b.

	I-131 to Noble Gas Ratio			
	RCS	Gap	Core Damage	Fuel Melt
CTM filtered	1.7E-06	3.0E-05	1.2E-05	2.2E-05
Stack filtered	4.6E-07	3.0E-05	1.2E-05	2.2E-05
CTM (unfiltered) or SGTR (below)	1.7E-04	3.0E-03	1.2E-03	2.2E-03
Stack (unfiltered)	4.6E-05	3.0E-03	1.2E-03	2.2E-03
TB, AuxB, RxB	5.8E-04	1.0E-02	4.1E-03	7.7E-03
SGTR (above)	4.2E-03	8.0E-02	3.0E-02	5.5E-02
MSLB (BFN)	4.6E-04	3.0E-02	1.2E-02	2.2E-02

- 2b. CALCULATE actual/projected iodine-131 release rate as follows:

$$\frac{\text{NG release rate}}{(\text{item A.1})} \times \frac{\text{I-131 to NG ratio}}{(\text{item 2a})} = \frac{\text{I-131 release rate}}{(\mu\text{Ci/s})}$$

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Manual Method for Assessing Airborne Releases

3. CALCULATE Thyroid CDE Dose Rate as follows:

$$\frac{\text{I-131 release rate } (\mu\text{Ci/s})}{\text{(item 2)}} \times \frac{\text{Thyroid CDE FACTOR}}{\text{(item 1)}} \div \frac{\text{wind speed}}{\text{(m/s)}} = \frac{\text{Thyroid CDE (rem/h)}}{\text{0.62 mile}}$$

MANUAL AIR  
5 mi TEDE  
DOSE

## \*E. Calculating 5 mile TEDE

USE the data from section A.1, THEN

1. OBTAIN an estimate of the release duration (t) \_\_\_\_\_ hours. Use 4 (four) hours unless known otherwise.
2. CIRCLE the TEDE FACTOR (rem/h per per  $\mu\text{Ci/m}$ ) below, based on the stability class and release level.

NOTE: USE ground level for all cases except for BFN stack.

	A	B	C	D	E	F	G
Ground	9.5E-11	1.5E-10	2.8E-10	9.5E-10	1.8E-09	3.5E-09	6.5E-09
Stack	9.0E-11	1.5E-10	2.6E-10	7.5E-10	1.1E-09	1.3E-09	1.1E-09

3. CIRCLE the appropriate TEDE Ratio below, based on release type/path:

## TEDE Ratio (at 5 mi)

	BWR RCS	PWR RCS	GAP	Core Damage	Fuel Melt	User Spec
Stack (unfiltered)	2.1	N/A	2.8	1.9	3.1	1.0
Stack (filtered)	2.1	N/A	1.0	0.9	1.0	1.0
CTM (unfiltered) or SGTR (below)	N/A	3.5	4.9	2.9	5.8	1.0
CTM (filtered)	N/A	1.8	1.0	1.0	1.0	1.0
SGTR (above water)	N/A	43	100	51	116	1.0
MSLB (BFN)	4.5	N/A	40	21	47	1.0
TB, RxB, AB	3.1	7.4	15	7.9	17	1.0

4. CALCULATE the TEDE Dose as follows:

$$\frac{\text{NG release rate } (\mu\text{Ci/s})}{\text{(item A.1)}} \times \frac{\text{TEDE FACTOR}}{\text{(item 2)}} \times \frac{\text{TEDE Ratio}}{\text{(item 3)}} \times \frac{\text{Duration (hrs)}}{\text{(item 1)}} \div \frac{\text{wind sp. (m/s)}}{\text{(item 1)}} = \frac{\text{TEDE (rem)}}{\text{5 mile}}$$

For Tritium Accidents (e.g., TPBAR handling or WGDT rupture),

5. CIRCLE the Tritium TEDE FACTOR (rem/h per
- $\mu\text{Ci/m}$
- ) below, based on the stability class.

A	B	C	D	E	F	G
4.0E-11	5.0E-11	1.1E-10	4.4E-10	9.5E-10	2.4E-09	5.5E-09

\*Revision

\*Appendix F      Page 7 of 8  
Manual Method for Assessing Airborne Releases

MANUAL AIR  
5 mi TEDE DOSE  
5 mi THY CDE DOSE

## 6. CALCULATE the Tritium TEDE as follows:

$$\frac{\text{Tritium Release Rate } (\mu\text{Ci/s})}{\text{Tritium TEDE FACTOR (item 5)}} \times \frac{\text{Duration (hrs) (item A.1)}}{\text{wind speed (m/s) (item A.1)}} = \text{Tritium TEDE (rem)}$$

## NOTE:

- For a TPBAR handling accident, the H-3 release can be estimated as:

$$\text{H-3 Release Rate} = \frac{\mu\text{Ci/cc H-3}}{60 \text{ min/sec}} \times \text{cfm} \times 28320 \text{ cc/cf}$$

$$\{ \text{H-3 release } (\mu\text{Ci/s}) = \# \mu\text{Ci/cc H-3} \times \text{building exhaust flow rate (cfm)} \times 28320 \text{ cc/cf} \times 1/60 \text{ min/s} \}$$

- For a WGD T Rupture accident, the default H-3 release is 2500 Ci over one hr or 6.94E+05  $\mu\text{Ci/s}$  for 1 hr

## 7) IF tritium accident also involves noble gases, THEN CALCULATE Total TEDE as follows:

$$\text{TEDE (rem)} + \text{Tritium TEDE (rem)} = \boxed{\text{Total TEDE (rem) 5 mile}}$$

**\*F. Calculating 5 mi THYROID CDE Doses**1. CIRCLE the Thyroid CDE FACTOR (rem/h per  $\mu\text{Ci/m}$ ), based on the stability class and release level.

NOTE: USE ground level for all cases except for BFN stack.

	A	B	C	D	E	F	G
Ground	2.0E-06	2.5E-06	5.0E-06	2.2E-05	4.7E-05	1.2E-04	2.7E-04
Stack	2.0E-06	2.5E-06	4.5E-06	7.7E-06	3.5E-06	2.3E-07	1.0E-11

2. OBTAIN the I-131 release rate from B.2 \_\_\_\_\_ ( $\mu\text{Ci/s}$ ).

## 3. CALCULATE Thyroid CDE Dose as follows:

$$\frac{\text{I-131 release rate } (\mu\text{Ci/s}) \text{ (item 2)}}{\text{Thyroid CDE FACTOR (item 1)}} \times \frac{\text{duration (hrs) (item C.1)}}{\text{wind speed (m/s) (item A.1)}} = \boxed{\text{Thyroid CDE (rem) 5 mile}}$$

\*Revision

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Manual Method for Assessing Airborne Releases

## Summary

**\*G. Summary of Results****Site Boundary TEDE Rates**

1. Total TEDE Rate (item C.7) \_\_\_\_\_ rem/h
2. Circle REP Emergency class based on TEDE rate above:

**For 0.62 mi TEDE dose rate ≥****REP Emergency Class**

1E-04 rem/h  
1E-02 rem/h  
1E-01 rem/h  
1E+00 rem/h

NOUE  
ALERT  
SAE  
GE

**Site Boundary Thyroid CDE Dose Rate**

3. CDE Dose Rate (section D.3) \_\_\_\_\_ rem/h
4. Circle REP Emergency class based on CDE rate above:

**For 0.62 mi CDE dose rate ≥****REP Emergency Class**

NA  
NA  
0.5 rem/h  
5 rem/h

---  
---  
SAE  
GE

**5 Mile TEDE**

5. TEDE without Tritium (section E.4) \_\_\_\_\_ rem.
6. Total TEDE with Tritium (section E.7) \_\_\_\_\_ rem.

**5 Mile Thyroid CDE**

7. Thyroid CDE (section F.3) \_\_\_\_\_ rem.

**Emergency Class**

8. Circle the most restrictive REP class from items 2 and 4: NOUE Alert SAE GE

END OF MANUAL  
ASSESSMENT  
DATA VERIFICATION

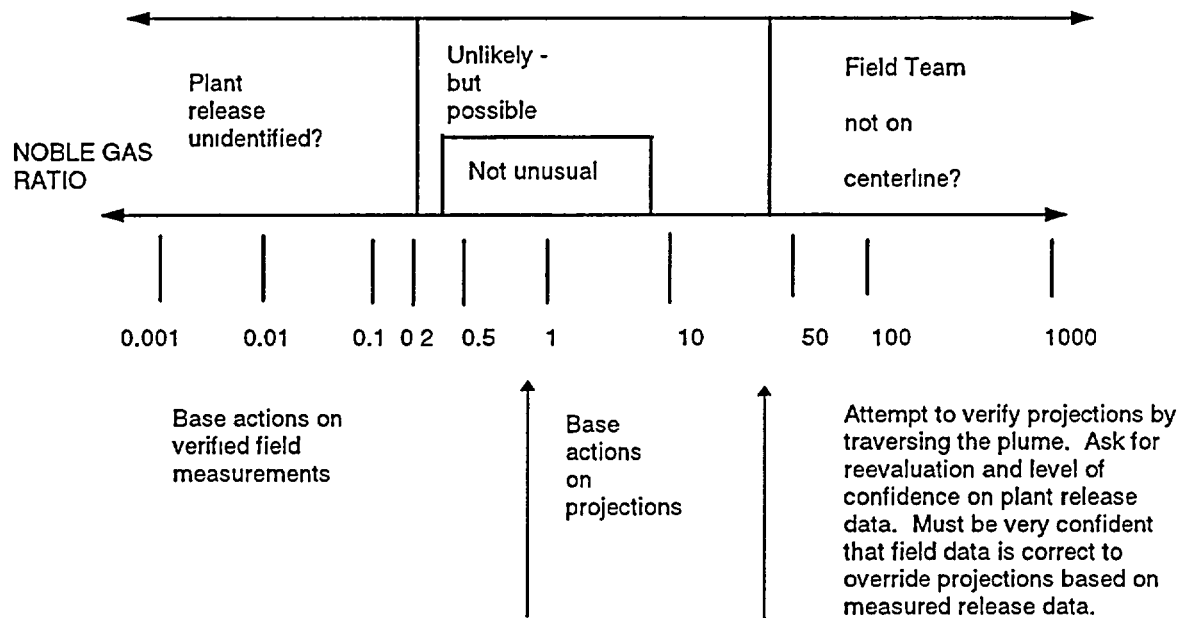
Entire Page Revised

Calculated by: (initial / date) \_\_\_\_\_/\_\_\_\_\_

Verified by: (initial / date) \_\_\_\_\_/\_\_\_\_\_

APPENDIX G  
COMPARISON OF MEASURED FIELD DATA TO DOSE PROJECTION MODELS

$$\text{Ratio} = \frac{\text{PROJECTED centerline dose rate}}{\text{MEASURED centerline dose rate}}$$



APPENDIX H  
WATERDOSE Evaluation of Liquid Release to the River

1. Log on to **WATERDOSE**. **DOUBLE CLICK** on the "CECC VAX" icon. **PRESS** return until prompted for username. **ENTER** username (WATERDOSE) and password (CECC).
2. **OBTAIN** the following information for input to WATERDOSE and **FOLLOW** code prompts.

**NOTE: TYPE CTRL Z any time to exit or re-start program.**

Plant: ☐ BFN ☐ SQN ☐ WBN

- a. Determine Release Point:: ☐ Diffuser ☐ Shoreline
- b. Length of release: \_\_\_\_\_ Hours
- c. Volume of release: \_\_\_\_\_ (ft<sup>3</sup>)
- d. Release Mix (nuclides and concentrations)

Nuclide	Concentration (μCi/ml)

3. **RUN** the WATERDOSE code using the available (or default below) information to obtain an estimate of the dose impact. (If the computer code is not operational, the dose calculation methodology contained in Appendix I can be used.)  
 BFN-33000 cfs                      SQN - 29000 cfs                      WBN - 2700 cfs

**NOTE: TYPE CTRL Z any time to exit or re-start program.**

4. **OBTAIN** the State Update Form (SUF). The Preparer and Verifier shall **initial and date** the results.
5. **TRANSMIT** (by spooling through the computer) the SUF to the TSC and State if approval to do so has been given by the RAC/RAM.
6. **TYPE CTRL Z any time to exit or re-start program.**

APPENDIX I Page 1 of 5  
Manual Evaluation of Liquid Releases to the RiverMANUAL  
RIVER

1. Plant: ☐ BFN ☐ SQN ☐ WBN
2. Release Point: ☐ Diffuser ☐ Shoreline
3. Release Time: Start \_\_\_\_\_ End \_\_\_\_\_ ☐ Eastern ☐ Central
4. Release Volume (V) \_\_\_\_\_ ft<sup>3</sup> (1 gal = 0.134 ft<sup>3</sup>)
5. Calculation of Hazard Index (HI):

Nuclide	Concentration ( $\mu\text{Ci/ml}$ )	Dose (rem/day per $\mu\text{Ci/ml}$ )	Hazard Index (rem/day)
	C	DF- Table 3	HI=C * DF
		Total Hazard Index	

6. Riverflow at the plant \_\_\_\_\_ ft<sup>3</sup>/s (cfs). This can be obtained from the ICS (for SQN and WBN) or River Operations. If flow data is not available use the following default values:  
BFN-33000 cfs SQN - 29000 cfs WBN - 2700 cfs
7. Calculate the downstream dose rate to hypothetical individual at first downstream Public Water Supply and then other locations of interest. Refer to Appendix J.

Location TRM	(table 2) Arrival Time Hours	(table 1) Dilution Factor (1/ft <sup>3</sup> ) D	(item 5) Hazard Index (rem/day) HI	(item 4) Release Volume (ft <sup>3</sup> ) V	Dose Rate (rem/day) D*H*V

8. Record the applicable data on the State Update Form in CECC EPIP-1 and distribute.

Comments: \_\_\_\_\_  
\_\_\_\_\_END OF MANUAL  
ASSESSMENT  
DATA VERIFICATION

Calculated by: (initial / date) \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Calculated by: (initial / date) \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_



APPENDIX I Page 2 of 5  
Manual Evaluation of Liquid Releases to the RiverTABLE 1  
DILUTION  
FACTOR  
(D)

## RELATIVE CONCENTRATION FACTORS-PER CUBIC FOOT RELEASED

## BROWNS FERRY NUCLEAR PLANT

Tennessee River Mile (TRM)	SHORELINE RELEASE		DIFFUSER PIPE RELEASE	
	Plant Side Shoreline D	Opposite Shoreline D	Centerline D	Shoreline D
294.00 Plant				
293.00	2.8E-08	.00E+00	1.4E-08	.00E+00
292.00	1.4E-08	.00E+00	6.9E-09	.00E+00
291.00	9.2E-09	.00E+00	4.6E-09	1.2E-36
290.00	6.9E-09	.00E+00	3.4E-09	8.2E-30
289.00	5.5E-09	.00E+00	2.8E-09	1.0E-25
288.00	4.6E-09	.00E+00	2.3E-09	5.1E-23
287.00	3.9E-09	.00E+00	2.0E-09	4.3E-21
286.00	3.4E-09	.00E+00	1.7E-09	1.2E-19
285.00	3.1E-09	.00E+00	1.5E-09	1.5E-18
284.00	2.8E-09	1.8E-42	1.4E-09	1.2E-17
283.00	2.5E-09	1.8E-39	1.3E-09	6.2E-17
282.00	2.3E-09	5.8E-37	1.1E-09	2.4E-16
281.00	2.1E-09	7.4E-35	1.1E-09	7.7E-16
280.00	2.0E-09	4.8E-33	9.8E-10	2.1E-15
279.00	1.8E-09	1.8E-31	9.2E-10	4.8E-15
278.00	1.7E-09	4.1E-30	8.6E-10	1.0E-14
274.90 Downstream Dam				

## SEQUOYAH NUCLEAR PLANT

TRM	SHORELINE RELEASE		DIFFUSER PIPE RELEASE	
	Plant Side Shoreline D	Opposite Shoreline D	Centerline D	Shoreline D
484.50 Plant				
484.00	3.5E-08	5.9E-34	1.8E-08	1.1E-14
483.00	1.4E-08	5.3E-19	7.2E-09	3.0E-11
482.00	9.1E-09	3.2E-15	4.6E-09	1.9E-10
481.00	6.6E-09	1.5E-13	3.3E-09	3.9E-10
480.00	5.2E-09	1.4E-12	2.6E-09	5.6E-10
479.00	4.3E-09	5.4E-12	2.2E-09	6.8E-10
478.00	3.7E-09	1.4E-11	1.8E-09	7.6E-10
477.00	3.2E-09	2.7E-11	1.6E-09	8.2E-10
476.00	2.8E-09	4.5E-11	1.4E-09	8.4E-10
475.00	2.5E-09	6.6E-11	1.3E-09	8.6E-10
474.00	2.3E-09	9.0E-11	1.2E-09	8.6E-10
473.00	2.1E-09	1.2E-10	1.1E-09	8.6E-10
472.00	1.9E-09	1.4E-10	1.0E-09	8.5E-10
471.00	1.8E-09	1.7E-10	9.8E-10	8.3E-10
471.00 Downstream Dam				

APPENDIX I Page 3 of 5  
Manual Evaluation of Liquid Releases to the RiverTABLE 1  
DILUTION  
FACTOR  
(D)RELATIVE CONCENTRATION FACTORS-PER CUBIC FOOT RELEASED

## WATTS BAR NUCLEAR PLANT

TRM	SHORELINE RELEASE		DIFFUSER PIPE RELEASE	
	Plant Side Shoreline D	Opposite Shoreline D	Centerline D	Shoreline D
528.00 Plant				
527.00	3.7E-08	1.2E-20	1.8E-08	2.3E-11
526.00	1.8E-08	1.5E-14	9.1E-09	4.1E-09
525.00	1.2E-08	1.3E-12	6.1E-09	1.0E-09
524.00	9.1E-09	1.2E-11	4.6E-09	1.4E-09
523.00	7.3E-09	4.0E-11	3.7E-09	1.7E-09
522.00	6.1E-09	9.0E-11	3.1E-09	1.8E-09
521.00	5.2E-09	1.6E-10	2.7E-09	1.8E-09
520.00	4.6E-09	2.3E-10	2.4E-09	1.8E-09
519.00	4.1E-09	3.1E-10	2.2E-09	1.8E-09
518.00	3.7E-09	3.8E-10	2.0E-09	1.8E-09
517.00	3.3E-09	4.6E-10	1.9E-09	1.7E-09
516.00	3.0E-09	5.2E-10	1.8E-09	1.7E-09
515.00	2.8E-09	5.8E-10	1.7E-09	1.6E-09
514.00	2.6E-09	6.4E-10	1.6E-09	1.6E-09
513.00	2.4E-09	6.8E-10	1.6E-09	1.5E-09
512.00	2.3E-09	7.2E-10	1.5E-09	1.5E-09
511.00	2.2E-09	7.6E-10	1.5E-09	1.4E-09
510.00	2.0E-09	7.9E-10	1.4E-09	1.4E-09
510.00	1.9E-09	8.2E-10	1.4E-09	1.4E-09
508.00	1.8E-09	8.4E-10	1.3E-09	1.3E-09
507.00	1.8E-09	8.6E-10	1.3E-09	1.3E-09
506.00	1.7E-09	8.7E-10	1.3E-09	1.3E-09
505.00	1.6E-09	8.8E-10	1.2E-09	1.2E-09
504.00	1.5E-09	8.9E-10	1.2E-09	1.2E-09
503.00	1.5E-09	9.0E-10	1.2E-09	1.2E-09
502.00	1.4E-09	9.1E-10	1.2E-09	1.2E-09
501.00	1.4E-09	9.1E-10	1.1E-09	1.1E-09
500.00	1.3E-09	9.1E-10	1.1E-09	1.1E-09
471.00 Downstream Dam				

APPENDIX I Page 4 of 5  
Manual Evaluation of Liquid Releases to the River

APPROXIMATE TRAVEL TIME TO MAXIMUM CONCENTRATION - HOURS

TABLE 2  
ARRIVAL  
TIME  
( HRS )

## BROWNS FERRY NUCLEAR PLANT

TRM

RIVER FLOW IN CUBIC FEET/SECOND

	25000	30000	33000	35000	37000	39000
294.00 Plant						
292.00	25	21	19	18	17	16
290.00	49	41	37	35	33	31
288.00	74	62	56	53	50	47
286.00	99	82	75	71	67	63
284.00	124	103	92	88	84	80
282.00	148	124	112	106	100	94
280.00	173	144	131	124	117	110
278.00	198	165	150	141	134	128
276.00	222	185	169	159	150	142
274.90 Downstream Dam						

## SEQUOYAH NUCLEAR PLANT

	21000	25000	29000	30000	33000
484.50 Plant					
483.00	5	4	4	3	3
481.00	12	10	8	8	7
479.00	18	15	13	13	12
477.00	25	21	18	17	16
475.00	32	26	23	22	20
473.00	38	32	28	27	24
471.00	45	38	32	31	28
471.00 Downstream Dam					

## WATTS BAR NUCLEAR PLANT

	19000	20000	25000	30000	35000
528.00 Plant					
526.00	5	4	3	3	3
524.00	10	9	7	6	6
522.00	15	14	11	9	9
520.00	20	19	15	12	12
518.00	25	24	19	16	15
516.00	30	29	23	19	18
514.00	35	33	27	22	21
512.00	40	38	30	25	24
510.00	45	43	34	29	28
508.00	50	48	38	32	31
506.00	56	53	42	35	34
504.00	61	58	46	38	37
502.00	66	62	50	41	40
500.00	71	67	54	45	43
471.00 Downstream Dam					

APPENDIX I Page 5 of 5  
Manual Evaluation of Liquid Releases to the RiverCritical Ingestion Dose Rate Factors  
(Derived from Regulatory Guide 1.109)  
Rem/day per  $\mu\text{Ci/ml}$ TABLE 3  
DOSE  
FACTORS  
(DF)

Nuclide	Dose Factor	Organ <sub>1</sub>	Age <sub>2</sub>	Nuclide	Dose Factor	Organ <sub>1</sub>	Age <sub>2</sub>
H-3	0.28	TB	C	Ru-103	43.2	GIT	A
C-14	16.9	B	C	Ru-105	58.9	GIT	C
Na-24	8.12	TB	C	Ru-106	356	GIT	A
P-32	1155	B	C	Ag-110m	121	GIT	A
Cr-51	1.34	GIT	A	Te-125m	21.8	K	A
Mn-54	28	GIT	A	Te-127m	55	K	A
Mn-56	67.8	GIT	C	Te-127	25.8	GIT	C
Fe-55	16.1	B	C	Te-129m	96	K	C
Fe-59	68	GIT	A	Te-129	20.4	GIT	I
Co-58	30	GIT	A	Te-131	168	GIT	A
Co-60	80.4	GIT	A	Te-131	6.4	GIT	I
Ni-63	753	B	C	Te-132	154	GIT	A
Ni-65	35.8	GIT	C	I-130	1332	THY	I
Cu-64	14.2	GIT	A	I-131	12500	THY	I
Zn-65	51.1	L	C	I-132	142	THY	I
Zn-69	12.33	GIT	I	I-133	2980	THY	I
Br-83	0.24	TB	C	I-134	37.4	THY	I
Br-84	0.28	TB	C	I-135	584	THY	I
Br-85	0.013	TB	C	Cs-134	538	L	C
Rb-86	153	L	I	Cs-136	90.4	L	C
Rb-88	0.45	L	I	Cs-137	438	B	I
Rb-89	0.26	L	I	Cs-138	1.13	GIT	I
Sr-89	1850	B	C	Ba-139	50.2	GIT	I
Sr-90	23800	B	C	Ba-140	116	B	C
Sr-91	74.2	GIT	C	Ba-141	7.27	GIT	I
Sr-92	239	GIT	C	Ba-142	1.06	GIT	I
Y-90	204	GIT	A	La-140	185	GIT	A
Y-91m	2.43	GIT	I	La-142	46.3	GIT	C
Y-91	155	GIT	A	Ce-141	48.4	GIT	A
Y-92	146	GIT	C	Ce-143	91.2	GIT	A
Y-93	238	GIT	C	Ce-144	330	GIT	A
Zr-95	61.8	GIT	A	Pr-143	80.6	GIT	A
Zr-97	210	GIT	A	Pr-144	4.44	GIT	I
Nb-95	42	GIT	A	Nd-147	69.8	GIT	A
Mo-99	39.8	K	C	W-187	56.4	GIT	A
Tc-99m	1.44	GIT	C	Np-239	48	GIT	A

1. THY = thyroid, GIT = Gastrointestinal Tract, K = Kidney, L = Liver,  
TB = Total Body, B = Bone

2. A = Adult, C = Child, I = Infant

## APPENDIX J Page 1 of 3

**BFN - PUBLIC AND INDUSTRIAL SURFACE WATER SUPPLIES**

<u>County-State</u>	<u>Plant Name</u>	<u>Water Source</u>	<u>Type of Water Supply</u>	<u>Notification</u> Advise State or Local Authorities listed in the REND
<u>10-Mile Radius</u>				
Limestone-Alabama	Browns Ferry Nuclear Plant	Tennessee River	Industrial	
Lawrence-Alabama	W. Morgan, E. Lawrence	Tennessee River	Municipal	
Lawrence-Alabama	Water Authority			
	Champion International	Tennessee River	Industrial &	
	(Courtland Plant)		Potable	
<u>25-Mile Radius</u>				
State of Alabama	Joe Wheeler State Park	Tennessee River	Municipal	
Lawrence-Alabama	TVA-Wheeler Dam <sup>1</sup>	Tennessee River	Industrial	
<u>50-Mile Radius</u>				
Lauderdale-Alabama	Florence City-Wilson Plant	Tennessee River	Municipal	
Colbert-Alabama	Reynolds Metals Company	Tennessee River	Industrial	
Colbert-Alabama	Muscle Shoals	Tennessee River	Municipal	
		Fleet Hollow Embayment		
Colbert-Alabama	TVA ERL	Fleet Hollow Embayment	Industrial &	
			Potable	
Colbert-Alabama	TVA-Wilson Dam	Tennessee River	Industrial	
Colbert-Alabama	Occidental Chemical Company	Tennessee River	Industrial	
Colbert-Alabama	Sheffield	Tennessee River	Municipal	
Colbert-Alabama	Sheffield Police			
Colbert-Alabama	TVA Colbert Fossil Plant	Tennessee River	Industrial	
Colbert-Alabama	Cherokee Water Works & Gas	Tennessee River	Municipal	
Colbert-Alabama	Cherokee Police (Day)			
Colbert-Alabama	Cherokee Police (Night)			
Colbert-Alabama	Laroche Industries	Tennessee River	Industrial	

<sup>1</sup>Potable water obtained from East Lauderdale County Water District.

APPENDIX J Page 2 of 3  
SQN - PUBLIC AND INDUSTRIAL SURFACE WATER SUPPLIES

<u>County-State</u>	<u>Plant Name</u>	<u>Water Source</u>	<u>Type of Water Supply</u>	<u>Notification</u> Advise State or Local Authorities listed in the REND
<u>10-Mile Radius</u>				
Hamilton-Tennessee	Sequoyah Nuclear Plant	Tennessee River	Industrial	
	Gold Point Marina	Tennessee River		
	East Side Utility	Tennessee River	Industrial	
		Tennessee River	Industrial	
	Chickamauga Dam (Power Service Center)	Tennessee River	Industrial	
	Chickamauga Dam	Tennessee River		
<u>25-Mile Radius</u>				
	E. I. Dupont Co.	Tennessee River	Industrial and Potable	
	Tennessee American Water Co.	Tennessee River	Municipal	
	Rock-Tennessee Mill <sup>1</sup>	Tennessee River	Industrial	
	Vulcan Sand & Gravel <sup>1</sup>	Tennessee River	Industrial	
	Signal Mountain Cement <sup>1</sup>	Tennessee River	Industrial	
	Medusa Cement Co.	Tennessee River	Industrial	
<u>50-Mile Radius</u>				
Marion-Tennessee	Signal Mountain Cement (Plant)	Tennessee River	Industrial	
	Signal Mountain Cement (Quarry)	Tennessee River	Industrial	
	South Pittsburg	Tennessee River	Municipal	
	Nickajack Dam	Tennessee River	Industrial	
Jackson-Alabama	Bridgeport	Tennessee River	Municipal	
Jackson-Alabama		and Spring		
	Bridgeport Police	Tennessee River and Spring		
	*Widows Creek Fossil Plant <sup>2</sup>	Tennessee River	Industrial	
	Mead Corporation	Tennessee River	Industrial	

<sup>1</sup>Obtains potable water from Tennessee-American Water Company.<sup>2</sup>Obtains potable water supply from Bridgeport - physically removed potable water intake in November 1986.

## APPENDIX J Page 3 of 3

WBN - PUBLIC AND INDUSTRIAL SURFACE WATER SUPPLIES ON THE TENNESSEE RIVER

<u>County-State</u>	<u>Plant Name</u>	<u>Water Source</u>	<u>Type of Water Supply</u>	<u>Notification</u> Advise State or Local Authorities listed in the REND
<u>10-Mile Radius</u>				
Rhea-Tennessee	Watts Bar Fossil & Hydro Plant <sup>1</sup> Watts Bar Nuclear Plant	Tennessee River Tennessee River	Industrial <sup>2,3</sup> *Industrial <sup>3,4</sup>	
<u>25-Mile Radius</u>				
Rhea-Tennessee	City of Dayton Dayton Police	Tennessee River	Municipal	
<u>50-Mile Radius</u>				
Hamilton-Tennessee	TVA Sequoyah Nuclear Plant East Side Utility	Tennessee River Tennessee River	Industrial Industrial	
	E. I. Dupont	Tennessee River	Industrial and Potable	
	Chickamauga Dam	Tennessee River	Industrial	
	Tennessee American Water Co.	Tennessee River	Municipal	
	Rock-Tennessee Mill <sup>5</sup>	Tennessee River	Industrial	
	Vulcan Sand and Gravel <sup>5</sup>	Tennessee River	Industrial	
	Signal Mountain Cement <sup>5</sup>	Tennessee River	Industrial	

<sup>1</sup>On layby status - water use when activated is about 445 MGD.<sup>2</sup>Cooling water.<sup>3</sup>Potable water to nuclear plant, steam plant, hydro plant, and resort area, provided through Watts Bar Reservation System (wells).<sup>4</sup>Cooling water and cooling tower makeup.<sup>5</sup>Obtains potable water supply from Tennessee-American Water Company.