Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

November 21, 2002

10 CFR Part 50, App E

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop OWFN, P1-35
Washington, D.C. 20555-0001

Gentleman:

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

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

TVA is submitting this notification in accordance with the requirements of 10 CFR Part 50, Appendix E, Section V. Specifically, several EPIPs were revised: (1) EPIP-2, Revision 25; (2) EPIP-3, Revision 28; (3) EPIP-4, Revision 27; (4) EPIP-5, Revision 32; (5) EPIP-6, Revision 22; (6) EPIP-7, Revision 20; (7) EPIP-12, Revision 0; (8) EPIP-13, Revision 9; and (9) EPIP-14, Revision 17. The revisions have an effective date of October 29, 2002. Additionally, EPIP 17 and EPIP-20 were canceled on October 29, 2002; therefore, please remove EPIP-17 Revision 25 and EPIP-20 Revision 9.

The enclosed information is being sent by certified mail. The signed receipt signifies that you have received this information. If you have any questions, please telephone me at (256) 729-2636.

Sincerely,

T. E. Abney
Manager of Licensing
and Industry Affairs

cc: See Page 2

A045

cc (Enclosure):
NRC Resident Inspector (Enclosure provided by
Browns Ferry Nuclear Plant BFN Document Control Unit)
10833 Shaw Road
Athens, Alabama 35611-6970

Mr. Paul E. Fredrickson, Branch Chief (2 Enclosures)
U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth Street S.W., Suite 23T85
Atlanta, Georgia 30303-8931

Mr. Kahtan N. Jabbour, Senior Project Manager (w/o Enclosure)
U.S. Nuclear Regulatory Commission
One White Flint, North
(MS 08G9)
Office of Nuclear Reactor Regulation
11555 Rockville Pike
Rockville, Maryland 20852-2738

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

EMERGENCY PLAN IMPLEMENTING PROCEDURE (EPIP) REVISION
EPIP-2, EPIP-3, EPIP-4, EPIP-5, EPIP-6, EPIP-7, EPIP-12,
EPIP-13, EPIP-14, EPIP-17 and EPIP-20

SEE ATTACHED

GENERAL REVISIONS

FILING INSTRUCTIONS

FILE DOCUMENTS AS FOLLOWS:

PAGES TO BE REMOVED		PAGES TO BE INSERTED	
EPIP-2	Revision 24	EPIP-2	Revision 25
EPIP-3	Revision 27	EPIP-3	Revision 28
EPIP-4	Revision 26	EPIP-4	Revision 27
EPIP-5	Revision 31	EPIP-5	Revision 32
EPIP-6	Revision 21	EPIP-6	Revision 22
EPIP-7	Revision 19	EPIP-7	Revision 20
NONE		EPIP-12	Revision 0
EPIP-13	Revision 8	EPIP-13	Revision 9
EPIP-14	Revision 16	EPIP-14	Revision 17
EPIP-17	Revision 25	NONE	
EPIP-20	Revision 9	NONE	

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP- 2

NOTIFICATION OF UNUSUAL EVENT

REVISION 25

PREPARED BY: TONY FELTMAN PHONE: 2038

RESPONSIBLE ORGANIZATION: EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT V. LITTLE DATE: 10/25/2002

EFFECTIVE DATE. 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number: EPIP-2 Revision Number: 25

Pages Affected: 2,4,7,11,12

Description of Change:

IC-27 This change is being conducted to incorporate the management of NRC Commitment changes as prescribed in the correspondence from site licensing RIMS R08000217713, to remove the Public Information Officer from the notification form and to human factor the notification and follow-up notification forms.
Page 2 - change to step 3.1.1 involves human factoring the Notification Form Title.
Page 7 - changes involves removing the "NRC Commitment Brackets to step requiring the review of PORC and the human factoring of applicable steps.
Page 7 - change involves human factoring attachment title
Page 8 - change involves human factoring attachment title and modifying information to ensure consistency with NRC guidance
Page 9 - change involves removing the Public Information Officer from the Attachment B notifications along with the NRC Commitment Brackets
Page 10 - change involved adding a clarify statement concerning the appropriate use of the Follow-up Notification Form

IC-28 EPIP-2, revision 23 is being issued to incorporate changes resulting from the letter, NEI to NRC (to Mr. Bruce A. Boger) dated December 18, 2001 requesting confirmation for EAL basis change to include response to a Site-Specific Security Credible Threat. This letter was developed in response to the NRC's October 6, 2001 Safeguards Advisory The change to this EPIP is a consequence to the EAL change. Under specific conditions this change will activate the ERO along with assembly/accountability. The revision also incorporates standardization of telephone numbers and actions taken by the Unit 1, Unit Operator during ERO staffing.
Page 2 - provide the action to staff the ERO when a credible site security threat notification exists
Page 3 - provide the action to assembly/account site personnel for the purpose of establishing the "Two Person (Line of Sight) Rule"
Page 4 - standardize the review of PORC for actual events.
Page 7 - add attachment D.
Page 11 - add attachment D, actions taken by the Unit 1 Unit operator to staff the ERO.

IC-29 EPIP-2, revision 24, page 3 is being conducted to add clarification to the caution note regarding on-site security conditions for assembly/accountability Additionally page 2 and 5 was revised to update telephone information regarding the Office of Radiation Control.

IC-30 EPIP-2, revision 25, pages 2, 7, 11 and 12 are being conducted to remove the activation of the ERO upon declaration of an Unusual Event based upon a credible threat Page 4 is being revised to change the reference for Dose Assessment from EPIP-14 to EPIP-13

1.0 PURPOSE

1.1 Provide for timely notification of appropriate individuals or organizations when the Shift Manager has determined by EPIP-1 that an incident has occurred which is classified as a NOTIFICATION OF UNUSUAL EVENT.

1.2 Provide for periodic analysis of the current situation by the Shift Manger/Site Emergency Director (SED) to determine whether the NOTIFICATION OF UNUSUAL EVENT should be terminated, continued, or upgraded to a more serious classification

2.0 SCOPE

This procedure applies to emergency events that are classified as a Notification of Unusual Event by EPIP-1, Emergency Classification Procedure

3.0 INSTRUCTIONS

3.1 Notification of the Operations Duty Specialist (ODS)

Note: The ODS **should** be notified within 5 minutes after the emergency event is declared

Date: ____/____/____

3.1.1 Complete Attachment A (Initial Notification Form). _____ INITIALS _____ TIME

3.1.2 **Notify** the ODS and **Provide** the information from Attachment A. _____ INITIALS _____ TIME

Note: Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS Telephone Numbers
5-751-1700
5-751-2495

If the ODS cannot be reached within 10 minutes, **Then** contact the State of Alabama directly by requesting the Office of Radiation Control at

Day Shift 8 a m - 5 p m. (Central Time)
Primary 9-1-334-206-5391
Backup: 9-1-800-582-1866

Holidays-Weekends-Offshifts
Montgomery State Trooper Post
9-1-334-242-4378

3.1.3 **Fax** a copy of Attachment A to the ODS for confirmation of information or state if contacted directly _____ INITIALS _____ TIME

ODS Fax	Office of Radiation Control
5-751-8620	9-1-334-206-5387

3.0 INSTRUCTIONS (CONTINUED)

3.1.4 **Receive** confirmation call from the ODS (to verify notification of the State of Alabama) (NA this step if the State was contacted directly). _____ INITIALS _____ TIME

3.2 NOTIFICATION OF SITE PERSONNEL

3.2.1 **Provide** the Unit 1, Unit Operator with a completed copy of Attachment A. _____ INITIALS _____ TIME

3.2.2 **Direct** the Unit 1, Unit Operator to make notifications from Attachment B (Unit 1, Unit Operator Notifications), utilizing information from Attachment A _____ INITIALS _____ TIME

3.2.3 **Make** the following plant P.A. announcement: _____ INITIALS _____ TIME

THIS IS (*NAME*), SHIFT MANAGER A NOTIFICATION OF UNUSUAL EVENT HAS BEEN DECLARED ON UNIT ___. I HAVE ASSUMED THE DUTIES OF SITE EMERGENCY DIRECTOR

3.2.4 **Notify** the Plant Manager or alternate

_____ INITIALS _____ TIME

CAUTION: Do not initiate Assembly and Accountability if:

1. A severe weather condition exist or projected on-site, such as a Tornado.
2. An on-site security risk condition exists that may present a danger to site personnel during the assembly/accountability process (Consult with Nuclear Security)

3.3 ACCOUNTABILITY

3.3.1 **If** the NOUE has been declared due to Security EAL, 6.7-U, and Nuclear Security recommends Accountability to establish the "Two Person (Line of Sight) Rule", **Then** implement EPIP-8, Appendix C, for Assembly and Accountability only. _____ INITIALS _____ TIME

3.0 INSTRUCTIONS (CONTINUED)

3.4 OFFSITE DOSE ASSESSMENT

3.4.1 Evaluate the need for offsite dose assessment. **(N/A STEP IF NOT APPLICABLE)** _____ INITIALS _____ TIME

3.4.1.1 When offsite dose assessment is required obtain the information from the CECC when operational

3.4.1.2 If the CECC is not operational, contact the TSC, when staffed or the RADCON Shift Supervisor and request the implementation of EPIP 13, for dose assessment.

3.5 NOTIFICATION OF THE NRC

3.5.1 **Notify** the NRC immediately or within 1 hour and if requested by the NRC maintain an open and continuous communications channel _____ INITIALS _____ TIME

Note **Utilize** the Emergency Notification System (ENS) when making this notification. Dial the first number listed on the sticker affixed to the ENS telephone, by dialing 9-1-"The Ten Digit Number Listed on the ENS Telephones". **If** the number is busy, **Then** select in order, the alternate numbers until a connection is achieved. No access codes are required.

3.0 INSTRUCTIONS (CONTINUED)

3.6 PERIODIC EVALUATION OF THE EVENT

3.6.1 Continue to **Evaluate** the event by using EPIP-1 as conditions warrant.

3.6.2 **If** other EAL conditions exist indicating the current emergency classification or significant changes in plant conditions have occurred since the last update to the ODS, and the CECC is not staffed, **Then, Complete** the "Follow-Up" Notification Form (Attachment C), notify the ODS and provide the new information Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS - 5-751-1700
5-751-2495

Note **If** the ODS cannot be reached, **Then** contact the State of Alabama directly by requesting the Office of Radiation Control at:

Day Shift 8 a m - 5 p m (Central Time)
Primary 9-1-334-206-5391
Backup. 9-1-800-582-1866

Holidays-Weekends-Offshifts
Montgomery State Trooper Post
9-1-334-242-4378

3.6.3 **If** the conditions warrants upgrading to a higher classifications, **Then** initiate the appropriate EPIP.

3.6.4 **If** the conditions warrant termination of the classification, **Then** enter the Termination section of this procedure at step 3 7.

3.6.5 **Re-enter** this procedural section as conditions warrant at step 3.6.1 or until directed to exit this procedure by steps 3.6 3 or 3 6 4.

3.0 INSTRUCTIONS (CONTINUED)

3.7 TERMINATION OF THE EVENT

If the situation no longer exists terminate the event and notify the following:

Date: ____/____/____

3.7.1 **Notify** the ODS of the termination of the emergency or the state directly if the ODS cannot be contacted.	INITIALS	TIME
3.7.2 **Notify** the NRC of the termination of the emergency	INITIALS	TIME
3.7.3 **Notify** the Plant Manager or Alternate of the termination of the emergency	INITIALS	TIME
3.7.4 **Complete** Attachment A by providing the time and date of termination.	INITIALS	TIME
3.7.4 **Notify** the Unit 1, Unit Operator. Provide the Unit 1, Unit Operator with the termination time and date and direct the Unit 1, Unit Operator to notify the individuals contacted on Attachment B of the termination of the emergency.	INITIALS	TIME

3.0 INSTRUCTIONS (CONTINUED)

3.8 CLOSURE OF THE NOTIFICATION OF UNUSUAL EVENT

3.8.1 Upon termination of the Notification of Unusual Event, the Shift Manager shall send the completed EPIP-2 and all attachments to Emergency Preparedness (EP). _____ INITIALS _____ TIME

3.8.2 Upon receipt of completed EPIP-2 and all attachments, Emergency Preparedness shall forward documents for the purpose of documentation storage _____ INITIALS _____ TIME

4.0 ATTACHMENTS

Attachment A - Initial Notification Form Notification of Unusual Event

Attachment B - Unit 1, Unit Operator Notifications

Attachment C - Follow Up Information Form Notification of Unusual Event

ATTACHMENT A (Page 1 of 1)
INITIAL NOTIFICATION FORM
NOTIFICATION OF UNUSUAL EVENT

☐ THIS IS AN ACTUAL EVENT ☐ THIS IS AN EXERCISE

This is _____
NAME

A **NOTIFICATION OF UNUSUAL EVENT** has been declared at Browns Ferry affecting

☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

Event Declared Time: _____ Date _____

EAL Designator. _____

Brief Description of the Event

_____

_____

_____

_____

_____

Radiological Conditions:

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

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

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

ATTACHMENT B (Page 1 of 1)
UNIT 1, UNIT OPERATOR NOTIFICATIONS

Date: ____/____/____

Note All notifications should be made utilizing the information located on EPIP 2, Attachment A

Received a completed copy of EPIP 2, Attachment A from the Site Emergency Director _____ INITIALS _____ TIME

Personnel Notifications	Initial Notifications		Termination Notifications	
Notify the Operations Manager (from the weekly duty list)	_____ Initials	_____ Time	_____ Initials	_____ Time
Notify the Vice President (from the weekly duty list)	_____ Initials	_____ Time	_____ Initials	_____ Time
Notify the REP manager (from the weekly duty list)	_____ Initials	_____ Time	_____ Initials	_____ Time
Notify the Nuclear Security Shift Supervisor Ext 3150 or 2219	_____ Initials	_____ Time	_____ Initials	_____ Time
Notify the NRC Resident Ext 2573, or 2572 or from the weekly duty list	_____ Initials	_____ Time	_____ Initials	_____ Time

ATTACHMENT C (Page 1 of 1)

FOLLOW-UP INFORMATION FORM
NOTIFICATION OF UNUSUAL EVENT

☐ THIS IS A REAL EVENT ☐ THIS IS A DRILL

Note This form is for conducting Follow-up Information only

This is _____ at Browns Ferry.
Name

There has been a NOTIFICATION OF UNUSUAL EVENT declared at Browns Ferry affecting
☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

The Reactor is ☐ Shutdown ☐ At Power

Plant Conditions are ☐ Stable ☐ Deteriorating

"Follow-Up" Information (e.g , Key Events, Status Changes)

_____
_____
_____
_____
_____

Current Radiological Conditions are

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

Additional Rad information: (e g , release duration)

_____
_____
_____

☐ There is no Protective Action Recommendation at this time

Please repeat the information you have received to ensure accuracy.

The time for this follow up is Time _____ Date: _____

SIGNATURE: _____

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-3

ALERT

REVISION 28

PREPARED BY: T. W. CORNELIUS PHONE. 2038

RESPONSIBLE ORGANIZATION: EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT LITTLE DATE· 10/18/2002

EFFECTIVE DATE: 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number: EPIP-3 Revision Number: 28

Pages Affected: 4

Description of Change:

IC-30 This change is being conducted to incorporate the management of NRC Commitment changes as prescribed in the correspondence from site licensing RIMS R08000217713, and to human factor the notification and follow-up notification forms

Page 2 - change to step 3.2 1 involves human factoring the Notification Form Title

Page 6 - changes involves removing the "NRC Commitment Brackets to step requiring the review of PORC and the human factoring of applicable steps.

Page 7 - change involves human factoring attachment title and modifying information to ensure consistency with NRC guidance.

Page 8 - change involves adding information regarding the support of the Unit 1 Operator in staffing the ERO

Page 9 - Updated information for the Unit Operator to use during the ERO staffing process

Page 10 - change involved adding a clarify statement concerning the appropriate use of the Follow-up Notification Form

IC-31 EPIP-3, revision 26 is being issued to incorporate changes regarding assembly and accountability actions. All actions to initiate the accountability and evacuation processes are now located in EPIP-8 The revision additionally standardizes telephone numbers, and PORC reviews This revision also adds clarification for the actions taken by the Unit 1 Unit Operator during their staffing of the ERO process.

Page 3 - added a statement to the caution information regarding security threat Clarified steps 3 4 1 and 3 4 2 to implement EPIP-8 regarding actions to be taken for assembly/accountability and evacuation

Page 6 - standardize Alert procedure closure information

Page 8.9 - Clarify actions taken by the Unit 1 Unit Operator during the notification attachment.

IC-32 EPIP-3, revision 27 is being conducted to incorporate changes regarding actions to be taken when dangerous conditions exist on site that would require the assembly of the ERO at the staging area. Additionally page 3 and 5 were revised to update telephone information regarding the Office of Radiation Control

Page 2 - change instruct the SED when to direct the Unit 1 Unit Operator to assembly the ERO at the staging area

Page 4 - revision adds clarification to the caution note regarding on-site security conditions for assembly/accountability

Page 8 - revision adds option for staging area

IC-33 EPIP-3, revision is being conduct to change the procedure reference for Dose Assessment from EPIP-14 to EPIP-13. Page 4 of this procedure is be revised

1.0 PURPOSE

1.1 Provide for timely notification of appropriate individuals or organizations when the Shift Manager/Site Emergency Director (SED) has determined by EPIP-1 that an incident has occurred which is classified as an ALERT.

1.2 Provide for periodic evaluation of the current situation by the Shift Manager/SED to determine whether the ALERT should be terminated, continued, or upgraded to a more serious classification.

2.0 SCOPE

This procedure applies to emergency events that are classified as Alert by EPIP-1, Emergency Classification Procedure

3.0 INSTRUCTIONS

Date: ____/____/____

3.1 **If** all Emergency Centers **ARE STAFFED, Then** notify the following that an **ALERT** Emergency Classification has been issued and EPIP 3 is being implemented, and continue in this procedure at Step 3 4. **If** all Emergency Centers **ARE NOT STAFFED, Then** N/A this step and continue in this procedure.

CECC ☐	Control Rooms ☐	_____ INITIALS	_____ TIME
TSC ☐	Plant PA Announcement ☐		
OSC ☐	This is NAME, Site Emergency Director, an Alert has been declared at BFN, we are currently implementing EPIP-3 Standby for further updates		

3.2 **Notification of the Operations Duty Specialist (ODS) & Emergency Responders**

Note: The ODS **should** be notified within 5 minutes after the emergency event is declared.

3.2.1 **Complete** Attachment A (Initial Notification Form) _____ INITIALS _____ TIME

3.2.2 **Activating Emergency Response Organization (ERO)**

3.2.2.1 **If** ongoing/anticipated on-site security events may present a danger to the emergency responders, **Then** consult with Nuclear Security _____ INITIALS _____ TIME

3.2.2.2 **If** ongoing/anticipated events present a danger to emergency responders, **Then** direct the Unit 1 Unit Operator to make notifications per Attachment B and select "Staging Area" as the option for the Emergency Paging System. _____ INITIALS _____ TIME

3.2.2.3 **If** there are no ongoing/anticipated danger to emergency responders, **Then** direct the Unit 1 Unit Operator to make notifications per Attachment B and select as applicable, "Drill" or "Emergency" as the option for the Emergency Paging System _____ INITIALS _____ TIME

3.0 INSTRUCTIONS (CONTINUED)

3.2.3 **Notify** the ODS and **Provide** the information from Attachment A

INITIALS _____ TIME _____

Note: Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS Telephone Numbers - 5-751-1700,or 2495

If the ODS cannot be reached within 10 minutes, **Then** contact the State of Alabama directly by requesting the Office of Radiation Control at:

Day Shift 8 a.m. - 5 p.m (Central)	Holidays-Weekends-Off-Shifts
Primary. 9-1-334-206-5391	Montgomery State Trooper Post
Backup: 9-1-800-582-1866	9-1-334-242-4378

3.2.4 **Fax** a copy of Attachment A to the ODS for confirmation of information or state if the state was contacted directly.

INITIALS _____ TIME _____

ODS Fax	Office of Radiation Control Fax
5-751-8620	9-1-334-206-5387

3.2.5 **Receive** confirmation call from the ODS (to verify notification of the State of Alabama)(NA this step, if the state was contacted directly).

INITIALS _____ TIME _____

3.3 NOTIFICATION OF SITE PERSONNEL

3.3.1 **Make** the following plant P.A announcement.

INITIALS _____ TIME _____

THIS IS (*NAME*), SHIFT MANAGER A ALERT HAS BEEN DECLARED ON UNIT ___. I HAVE ASSUMED THE DUTIES OF SITE EMERGENCY DIRECTOR REPORT TO YOUR ASSIGNED EMERGENCY RESPONSE FACILITY AT THIS TIME.

3.0 INSTRUCTIONS (CONTINUED)

CAUTION: Do not initiate Assembly and Accountability if

1. A severe weather condition exist/projected on-site, such as a Tornado
2. An on-site security risk condition exists that may present a danger to site personnel during the assembly/accountability process (Consult with Nuclear Security).

3.4 ACCOUNTABILITY

3.4.1 **If** the emergency situation warrants an Assembly, Accountability, **Then** implement EPIP-8, Appendix C, concurrently with this procedure (N/A STEP IF NOT APPLICABLE)

INITIALS _____ TIME _____

3.4.2 **If** the emergency situation does not warrant an Assembly, Accountability at this time, **Continue** to assess the situation, implementing EPIP-8 when necessary

3.5 OFFSITE DOSE ASSESSMENT

3.5.1 Evaluate the need for offsite dose assessment (N/A STEP IF NOT APPLICABLE)

INITIALS _____ TIME _____

3.5.1.1 When offsite dose assessment is required obtain the information from the CECC when operational

3.5.1.2 If the CECC is not operational, contact the TSC, when staffed or the RADCON Shift Supervisor and request the implementation of EPIP 13, for dose assessment

3.0 INSTRUCTIONS (CONTINUED)

3.6 NOTIFICATION OF THE NRC

3.6.1 **Notify** the NRC immediately or within 1 hour and if requested by the NRC maintain an open and continuous communications channel _____ INITIALS _____ TIME

Note. **Utilize** the Emergency Notification System (ENS) when making this notification. Dial the first number listed on the sticker affixed to the ENS telephone, by dialing 9-1-"The Ten Digit Number Listed on the ENS Telephones". **If** the number is busy, **Then** select in order, the alternate numbers until a connection is achieved. No access codes are required.

3.7 PERIODIC EVALUATION OF THE EVENT

3.7.1 Continue to **Evaluate** the event using EPIP-1 as conditions warrant

3.7.2 **If** plant conditions warrant the need for follow up information, **Complete** the Follow Up Notification Form, Attachment C.

Note: Conditions that warrant this evaluation are as a minimum when other EAL conditions exist indicating the current emergency classification or significant changes in plant conditions have occurred

3.7.3 **If** the CECC is not staffed, **Then** notify the ODS and provide follow up information from the completed Attachment C form Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS - 5-751-2495, 1700

Note: **If** the ODS cannot be reached, **Then** contact the State of Alabama directly by requesting the Office of Radiation Control at.

Day Shift 8 a m - 5 p m (Central Time)		Holidays-Weekends-Off-shifts
Primary:	9-1-334-206-5391	Montgomery State Trooper Post
Backup:	9-1-800-582-1866	9-1-334-242-4378

3.7.4 **If** the conditions warrant upgrading to a higher classification, **Then** initiate the appropriate EPIP.

3.0 INSTRUCTIONS (CONTINUED)

3.7.5 **If** the conditions warrants termination of the classifications, **Then** enter EPIP-16, Termination and Recovery Procedure.

3.7.6 **After** the evaluation has been completed, if staffed, **Notify** the following of the status

- CECC
- NRC (ENS)
- TSC
- OSC
- CONTROL ROOMS
- PLANT PA ANNOUNCEMENT

3.7.7 **Re-enter** this procedural section as conditions warrant at step 3 7 1 or until directed to exit this procedure by steps 3.7 4 or 3.7 5.

3.8 CLOSURE OF THE ALERT

3.8.1 Upon termination of the Notification of Alert, the Shift Manager shall send the completed EPIP-3 and all attachments to Emergency Preparedness (EP) _____ INITIALS _____ TIME

3.8.2 Upon receipt of completed EPIP-3 and all attachments, Emergency Preparedness shall forward documents for the purpose of documentation storage. _____ INITIALS _____ TIME

4.0 ATTACHMENTS

Attachment A - Initial Notification Form Alert

Attachment B - Unit 1, Unit Operator Notifications

Attachment C - Follow Up Information Form Alert

ATTACHMENT A (Page 1 of 1)
INITIAL NOTIFICATION FORM
ALERT

☐ THIS IS A REAL EVENT ☐ THIS IS A DRILL

This is _____.
NAME

An **ALERT** has been declared at Browns Ferry affecting

☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

Event Declared: Time: _____ Date: _____

EAL Designator: _____

Brief Description of the Event

_____

_____

_____

_____

_____

Radiological Conditions.

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

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

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

ATTACHMENT B (Page 1 of 2)
UNIT 1, UNIT OPERATOR NOTIFICATIONS

Date: ____/____/____

NOTES: **(1)** The Emergency Paging System (EPS) consists of a dedicated touch screen CRT Activation of any screen feature requires the user place their fingertip within the boundary of the select button and leave it there for at least 1 second The CRT Screen will normally display a large rectangle that indicates that the paging system is available but currently inactive.

(2) If the EPS fails to operate, contact the SM/SED immediately Request that the ODS be contacted to initiate the system from his location If the system fails to operate from the ODS area, then utilize the Weekly Duty List and Call-Out List to manually staff the Emergency Responders, implementing this attachment at step E.

1. Activation of the Emergency Paging System (EPS)

A **PRESS** the EPS CRT Screen once to activate the paging options. _____ INITIALS _____ TIME

B. **PRESS** the appropriate option as instructed by the SED _____ INITIALS _____ TIME
- PAGER TEST
- DRILL
- EMERGENCY
- STAGING AREA
- ABORT

C. **PRESS** the START Button to initiate the option or **ABORT** to deny the option request. _____ INITIALS _____ TIME

D. **MONITOR** the Paging System Terminal Display _____ INITIALS _____ TIME

1 **IF** . A "NO" response is observed
OR
The position being paged has not responded within approximately 20 minutes

THEN . Utilize the Weekly Duty List and attempt to contact the position representative with available information (No Fitness for Duty Question Required)

2. **IF**. . The individual cannot be reached utilizing the Weekly Duty List

THEN .. Utilize the Call-Out List and attempt to contact an alternate position representative (Fitness for Duty Question Required)

ATTACHMENT B (Page 2 of 2)
UNIT 1, UNIT OPERATOR NOTIFICATIONS

Date: ____/____/____

	INITIALS	TIME
E. Manual Call-Out (N/A step if EPS operates normally)		
1. Utilize the current Weelky Duty List and contact positions as listed		
2. If a position can not be reached from the current Weekly Duty list, then refer to the Call-out List as applicable to fill all vacant positions		
F. **CONTINUE** until all positions have been filled		
2. **Notify** the Unit Supervisors on shift.		
3. **Notify** Nuclear Security Shift Supervisor and state "AN ALERT HAS BEEN DECLARED" and direct to activate EPIP-11, Security and Access Control.		
• Plant Extension 3150 or 2219		
4. **Notify** the Chemistry Lab Supervisor and state "AN ALERT HAS BEEN DECLARED" and direct to implement 2/3-TI-331, Post Accident Sampling Procedure and CI-900 series, Analysis Procedures.		
• Plant Extension 2367 or 2368		
5. **Notify** the RADCON Shift Supervisor and state "AN ALERT HAS BEEN DECLARED" and direct to activate EPIP-14, Radiological Control Procedure.		
• Plant Extension 7865 or 3104		
6. **Notify** the "On-Call" NRC Resident and state "AN ALERT HAS BEEN DECLARED," per BFN-EPIP-03.		
• Plant Extension 2572 [Secretary] or from weekly duty list		

ATTACHMENT C (Page 1 of 1)
FOLLOW-UP INFORMATION FORM
ALERT

☐ THIS IS A REAL EVENT ☐ THIS IS A DRILL

Note. This form is for conducting Follow-up Information only.
This is _____ at Browns Ferry
Name
There has been a Alert declared at Browns Ferry affecting
☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

The Reactor is ☐ Shutdown ☐ At Power

Plant Conditions are ☐ Stable ☐ Deteriorating

"Follow-Up" Information (e g , Key Events, Status Changes)

_____
_____
_____
_____
_____

Current Radiological Conditions are
- ☐ No Abnormal Releases Offsite
- ☐ Airborne Release Offsite
- ☐ Liquid Release Offsite
- ☐ Release Information Not Known

Additional Rad information (e g , release duration)

_____
_____
_____

☐ There is no Protective Action Recommendation at this time

Please repeat the information you have received to ensure accuracy

The time for this follow up is Time _____ Date _____

SIGNATURE: _____

LAST PAGE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-4

SITE AREA EMERGENCY

REVISION 27

PREPARED BY: T. W. CORNELIUS PHONE. 2038

RESPONSIBLE ORGANIZATION: EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT LITTLE DATE: 10/18/2002

EFFECTIVE DATE: 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number: EPIP-4 Revision Number: 27

Pages Affected: 4

Description of Change:

IC-31 This change is being conducted to incorporate a manual method of evacuating on-site, non-emergency response personnel during emergency situations In addition changes to the procedure are being conducted to incorporate the management of NRC Commitment changes as prescribed in the correspondence from site licensing RIMS R08000217713, and to human factor the notification and follow-up notification forms.

Page 2 - change to step 3 2.1 involves human factoring the Notification Form Title

Page 3- -changes to steps 3.4.1 - 3 4.5 involves information regarding steps for the SED to take when conducting an Accountably/Assembly and Evacuation.

Page 6 - changes involves removing the "NRC Commitment Brackets to step requiring the review of PORC and the human factoring of applicable steps

Page 7 - change involves human factoring attachment title.

Page 8 - change involves human factoring attachment title and modifying information to ensure consistency with NRC guidance

Page 9 - change involves adding information for Unit 1 Operator regarding ERO staffing support.

Page 10 - updated information for the Unit Operator to use during the ERO staffing process.

Page 11 - change involved adding a clarify statement concerning the appropriate use of the Follow-up Notification Form.

IC-32 EPIP-4, revision 25 is being issued to incorporate changes regarding assembly and accountability actions All actions to initiate the accountability and evacuation processes are now located in EPIP-8 The revision additionally standardizes telephone numbers, and PORC reviews This revision also adds clarification for the actions taken by the Unit 1 Unit Operator during their staffing of the ERO process

Page 3 - added a statement to the caution information regarding security threat Clarified steps 3.4.1 and 3.4.2 to implement EPIP-8 regarding actions to be taken for assembly/accountability and evacuation

Page 6 - standardize Site Area Emergency procedure closure information

Page 8,9 - Clarify actions taken by the Unit 1 Unit Operator during the notification attachment

IC-33 EPIP-4, revision 26 is being conducted to incorporate changes regarding actions to be taken when dangerous conditions exist on site that would require the assembly of the ERO at the staging area Additionally page 3 and 5 were revised to update telephone information regarding the Office of Radiation Control.

Page 2 - change instruct the SED when to direct the Unit 1 Unit Operator to assembly the ERO at the staging area

Page 4 - revision adds clarification to the caution note regarding on-site security conditions for assembly/accountability

Page 8 - revision adds option for staging area

IC-34 EPIP-4, revision 27 is being conduct to change the procedure reference for Dose Assessment from EPIP-14 to EPIP-13 Page 4 of this procedure is be revised.

1.0 PURPOSE

1.1 Provide for timely notification of appropriate individuals or organizations when the Shift Manager/Site Emergency Director (SED) has determined by EPIP-1 that an incident has occurred which is classified as a SITE AREA EMERGENCY (SAE)

1.2 Provide for periodic evaluation of the current situation by the Shift Manager/SED to determine whether the SAE should be terminated, continued, or upgraded to a more serious classification

2.0 SCOPE

This procedure applies to emergency events that are classified as Site Area Emergency by EPIP-1, Emergency Classification Procedure

3.0 INSTRUCTIONS

Date: ____/____/____

3.1 If all Emergency Centers **ARE STAFFED, Then** notify the following that a **SITE AREA EMERGENCY** Emergency Classification has been issued and EPIP 4 is being implemented, and continue in this procedure at Step 3 4. **If** all Emergency Centers **ARE NOT STAFFED, Then** N/A this step and continue in this procedure

CECC ☐	Control Rooms ☐		INITIALS	TIME
TSC ☐	Plant PA Announcement ☐			
OSC ☐	This is NAME, Site Emergency Director, an SAE has been declared at BFN, we are currently implementing EPIP-4 Standby for further updates			

3.2 Notification of the Operations Duty Specialist (ODS) & Emergency Responders

Note The ODS **should** be notified within 5 minutes after the emergency event is declared

3.2.1 **Complete** Attachment A (Initial Notification Form). INITIALS ____ TIME ____

3.2.2 Activating Emergency Response Organization (ERO)

3.2.2.1 **If** ongoing/anticipated on-site security events may present a danger to the emergency responders, **Then** consult with Nuclear Security INITIALS ____ TIME ____

3.2.2.2 **If** ongoing/anticipated events present a danger to emergency responders, **Then** direct the Unit 1 Unit Operator to make notifications per Attachment B and select "Staging Area" as the option for the Emergency Paging System. INITIALS ____ TIME ____

3.2.2.3 **If** there are no ongoing/anticipated danger to emergency responders, **Then** direct the Unit 1 Unit Operator to make notifications per Attachment B and select as applicable, "Drill" or "Emergency" as the option for the Emergency Paging System. INITIALS ____ TIME ____

3.0 INSTRUCTIONS (CONTINUED)

3.2.3 **Notify** the ODS and **Provide** the information from Attachment A. _____ INITIALS _____ TIME

Note: Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS Telephone Numbers
5-751-1700, 2495

If the ODS cannot be reached within 10 minutes, **Then** contact the State of Alabama directly by requesting the Rad Health Duty Officer at:

Day Shift 8 a m - 5 p m.(Central)	Holidays-Weekends-Off-Shifts
Primary: 9-1-334-206-5391	Montgomery State Trooper Post
Backup: 9-1-800-582-1866	9-1-334-242-4378

3.2.4 **Fax** a copy of Attachment A to the ODS for confirmation of information or if the state is contacted directly. _____ INITIALS _____ TIME

ODS Fax	Office of Radiation Control Fax
5-751-8620	9-1-334-206-5387

3.2.5 **Receive** confirmation call from the ODS (to verify notification of the State of Alabama)(NA this step, if the state was contacted directly) _____ INITIALS _____ TIME

3.3 NOTIFICATION OF SITE PERSONNEL

3.3.1 **Make** the following plant P.A. announcement: _____ INITIALS _____ TIME

THIS IS (*NAME*), SHIFT MANAGER A SITE AREA EMERGENCY HAS BEEN DECLARED ON UNIT ___. I HAVE ASSUMED THE DUTIES OF SITE EMERGENCY DIRECTOR. REPORT TO YOUR ASSIGNED EMERGENCY RESPONSE FACILITY AT THIS TIME.

3.0 INSTRUCTIONS (CONTINUED)

CAUTION: Do not initiate Assembly and Accountability if

1 A severe weather condition exist or projected on-site, such as a Tornado
2 An on-site security risk condition exists that may present a danger to site personnel during the assembly/accountability process (Consult with Nuclear Security)

3.4 ACCOUNTABILITY AND EVACUATION OF NON-EMERGENCY RESPONDERS

3.4.1 **If** Assembly and Accountability has not been conducted, **Then**, implement EPIP-8, Appendix C concurrently with this procedure. **If** Accountability has been conducted, **Then** N/A this step and continue in this procedure at step 3.4 2. _____ INITIALS _____ TIME

3.4.2 **If** an order to evacuate non-emergency responders has not be issued, **Then** upon completion of Assembly and Accountability, initiate the order to evacuate non-emergency responders, through the implementation of EPIP-8, Appendix F, concurrently with this procedure **If** the order to evacuate non-emergency responders has been conducted, **Then** continue in this procedure at step 3.5 1 _____ INITIALS _____ TIME

3.5 DOSE ASSESSMENT

3.5.1 Evaluate the need for offsite dose assessment (N/A STEP IF NOT APPLICABLE) _____ INITIALS _____ TIME

3.5.1.1 **When** offsite dose assessment is required, obtain the information from the CECC when operational

3.5.1.2 **If** the CECC is not operational, contact the TSC, when staffed, or the RADCON Shift Supervisor and request the implementation of EPIP 13, for dose assessment

3.0 INSTRUCTIONS (CONTINUED)

3.6 NOTIFICATION OF THE NRC

3.6.1 **Notify** the NRC immediately or within 1 hour, and if requested by the NRC maintain an open and continuous communications channel

_____ INITIALS _____ TIME

Note: **Utilize** the Emergency Notification System (ENS) when making this notification. Dial the first number listed on the sticker affixed to the ENS telephone, by dialing 9-1- "The Ten Digit Number Listed on the ENS Telephones". **If** the number is busy, **Then** select in order, the alternate numbers until a connection is achieved. No access codes are required

3.7 PERIODIC EVALUATION OF THE EVENT

3.7.1 Continue to **Evaluate** the event using EPIP-1 as conditions warrant.

3.7.2 **If** plant conditions warrant the need for follow up information, **Complete** the Follow Up Notification Form, Attachment C.

Note: Conditions that warrant this evaluation are as a minimum when other EAL conditions exist indicating the current emergency classification or significant changes in plant conditions have occurred.

3.7.3 **If** the CECC is not staffed, **Then** notify the ODS and provide follow up information from the completed Attachment C form Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS - 5-751-2495, 1700

Note: **If** the ODS cannot be reached, **Then** contact the State of Alabama directly by requesting the Rad Health Duty Officer at

Day Shift 8 a m - 5 p m (Central Time)		Holidays-Weekends-Off-shifts	
Primary	9-1-334-206-5391	Montgomery State Trooper Post	
Backup:	9-1-800-582-1866		9-1-334-242-4378

3.0 INSTRUCTIONS (CONTINUED)

3.7 PERIODIC EVALUATION OF THE EVENT (CONTINUED)

3.7.4 **If** the conditions warrants upgrading to a higher classification, **Then** initiate EPIP-5, General Emergency

3.7.5 **If** the conditions warrant termination of the classification, **Then** enter EPIP-16, Termination and Recovery Procedure

3.7.6 **After** the evaluation has been completed, if staffed, **Notify** the following of the status

- CECC
- NRC (ENS)
- TSC
- OSC
- CONTROL ROOMS
- PLANT PA ANNOUNCEMENT

3.7.7 **Re-enter** this procedural section as conditions warrant at step 3.7 1 or until directed to exit this procedure by steps 3 7 4 or 3 7 5.

3.8 CLOSURE OF THE SITE AREA EMERGENCY

3.8.1 Upon termination of the Notification of Site Area Emergency, the Shift Manager shall send the completed EPIP-4 and all attachments to Emergency Preparedness (EP) — INITIALS _____ TIME _____

3.8.2 Upon receipt of completed EPIP-4 and all attachments, Emergency Preparedness shall forward documents for the purpose of documentation storage. — INITIALS _____ TIME _____

4.0 ATTACHMENTS

Attachment A - Initial Notification Form Site Area Emergency

Attachment B - Unit 1, Unit Operator Notifications

Attachment C - Follow Up Information Form Site Area Emergency

ATTACHMENT A (Page 1 of 1)
INITIAL NOTIFICATION FORM
SITE AREA EMERGENCY

☐ THIS IS A REAL EVENT ☐ THIS IS A DRILL

This is _____.
NAME

A **SITE AREA EMERGENCY** has been declared at Browns Ferry affecting:

☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

Event Declared: Time _____ Date. _____

EAL Designator: _____

Brief Description of the Event:

_____

_____

_____

_____

Radiological Conditions:

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

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

☐ **Meteorological conditions are:**
Wind Speed. _____ m.p.h
Wind Direction From _____ degrees

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

ATTACHMENT B (Page 1 of 2)
UNIT 1, UNIT OPERATOR NOTIFICATIONS

Date: ____/____/____

NOTES: (1) The Emergency Paging System consists of a dedicated touch screen CRT Activation of any screen feature requires the user place their fingertip within the boundary of the select button and leave it there for at least 1 second. The CRT Screen will normally display a large rectangle that indicates that the paging system is available but currently inactive.

(2) If the EPS fails to operate, contact the SM/SED immediately Request that the ODS be contacted to initiate the system from his location If the system fails to operate from the ODS area, then utilize the Weekly Duty List and Call-Out List to manually staff the Emergency Responders, implementing this attachment at step E

1. Activation of the Emergency Paging System (EPS)

A **PRESS** the EPS CRT Screen once to activate the paging options — INITIALS _____ TIME _____

B **PRESS** the appropriate option — INITIALS _____ TIME _____
- PAGER TEST
- DRILL
- EMERGENCY
- STAGING AREA
- ABORT

C **PRESS** the START Button to initiate the option or **ABORT** to deny the option request. — INITIALS _____ TIME _____

D **MONITOR** the Paging System Terminal Display — INITIALS _____ TIME _____

1 **IF** . A "NO" response is observed
OR
The position being paged has not responded within approximately 20 minutes

THEN . Utilize the Weekly Duty List and attempt to contact the position representative with available information (No Fitness for Duty Question Required)

2. **IF** . The individual cannot be reached utilizing the Weekly Duty List

THEN. . Utilize the Call-Out List and attempt to contact an alternate position representative (Fitness for Duty Question Required)

ATTACHMENT B (Page 2 of 2)
UNIT 1, UNIT OPERATOR NOTIFICATIONS

Date: ____/____/____

E. Manual Call-Out (N/A step if EPS operates normally) — INITIALS _____ TIME _____

1. Utilize the current Weelky Duty List and contact positions as listed

2 If a position can not be reached from the current Weekly Duty list, then refer to the Call-out List as applicable to fill all vacant positions.

F **CONTINUE** until all positions have been filled — INITIALS _____ TIME _____

2. **Notify** the Unit Supervisors on shift. — INITIALS _____ TIME _____

3. **Notify** Nuclear Security Shift Supervisor and state "AN SITE AREA EMERGENCY HAS BEEN DECLARED" and direct to activate EPIP-11, Security and Access Control. — INITIALS _____ TIME _____

   - Plant Extension 3150 or 2219

4. **Notify** the Chemistry Lab Supervisor and state "AN SITE AREA EMERGENCY HAS BEEN DECLARED" and direct to implement 2/3-TI-331, Post Accident Sampling Procedure and CI-900 series, Analysis Procedures — INITIALS _____ TIME _____

   - Plant Extension 2367 or 2368

5. **Notify** the RADCON Shift Supervisor and state "AN SITE AREA EMERGENCY HAS BEEN DECLARED" and direct to activate EPIP-14, Radiological Control Procedure. — INITIALS _____ TIME _____

   - Plant Extension 7865 or 3104

6. **Notify** the "On-Call" NRC Resident and state "AN SITE AREA EMERGENCY HAS BEEN DECLARED". — INITIALS _____ TIME _____

   - Plant Extension 2572 [Secretary] or from weekly duty list

ATTACHMENT C (Page 1 of 1)

FOLLOW-UP INFORMATION FORM

SITE AREA EMERGENCY

☐ THIS IS A REAL EVENT ☐ THIS IS A DRILL

Note This form is for conducting Follow-up Information only.

This is _____ at Browns Ferry
Name

There has been a Site Area Emergency declared at Browns Ferry affecting:

☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

The Reactor is ☐ Shutdown ☐ At Power

Plant Conditions are ☐ Stable ☐ Deteriorating

"Follow-Up" Information (e g , Key Events, Status Changes)

_____

_____

_____

_____

_____

Current Radiological Conditions are:

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

Additional Rad information: (e g , release duration)

_____

_____

_____

☐ There is no Protective Action Recommendation at this time

Please repeat the information you have received to ensure accuracy.

The time for this follow up is Time: _____ Date _____

SIGNATURE: _____

LAST PAGE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-5

GENERAL EMERGENCY

REVISION 32

PREPARED BY: T W CORNELIUS PHONE: 2038

RESPONSIBLE ORGANIZATION EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT LITTLE DATE 10/18/2002

EFFECTIVE DATE 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number: EPIP-5 Revision Number: 32

Pages Affected: 5

Description of Change:

IC-37 This change is being conducted to incorporate a manual method of evacuating on-site, non-emergency response personnel during emergency situations In addition changes to the procedure are being conducted to incorporate the management of NRC Commitment changes as prescribed in the correspondence from site licensing RIMS R08000217713, and to human factor the notification and follow-up notification forms.

Page 2 - change to step 3.2.1 involves human factoring the Notification Form Title and revised telephone for Morgan County.

Page 3/4 - changes to steps 3 4 1 - 3 4.5 involves information regarding steps for the SED to take when conducting an Accountably/Assembly and Evacuation

Page 6 - changes involves removing the "NRC Commitment Brackets to step requiring the review of PORC and the human factoring of applicable steps

Page 7 - change involves human factoring attachment title

Page 8 - change involves human factoring attachment title

Page 9 - change involves adding information for Unit 1 Operator regarding ERO staffing support

Page 10 - revised to update information supporting Unit 1 Operator actions regarding ERO staffing support.

Page 11 - revised Protective Action Recommendation Flowchart

Page 12 - change involved adding a clarify statement concerning the appropriate use of the Follow-up Notification Form

IC-38 EPIP-4, revision 25 is being issued to incorporate changes regarding assembly and accountability actions All actions to initiate the accountability and evacuation processes are now located in EPIP-8 The revision additionally standardizes telephone numbers, and PORC reviews This revision also adds clarification for the actions taken by the Unit 1 Unit Operator during their staffing of the ERO process

Page 3 - added a statement to the caution information regarding security threat Clarified steps 3.4.1 and 3 4 2 to implement EPIP-8 regarding actions to be taken for assembly/accountability and evacuation

Page 6 - standardize Site Area Emergency procedure closure information.

Page 8.9 - Clarify actions taken by the Unit 1 Unit Operator during the notification attachment

IC-39 EPIP-5, revision 31 is being conducted to incorporate changes regarding actions to be taken when dangerous conditions exist on site that would require the assembly of the ERO at the staging area Additionally page 3 and 6 were revised to update telephone information regarding the Office of Radiation Control.

Page 2 - change instruct the SED when to direct the Unit 1 Unit Operator to assembly the ERO at the staging area.

Page 4 - revision adds clarification to the caution note regarding on-site security conditions for assembly/accountability

Page 9 - revision adds option for staging area

IC-40 EPIP-4, revision 32 is being conduct to change the procedure reference for Dose Assessment from EPIP-14 to EPIP-13 Page 5 of this procedure is be revised

1.0 PURPOSE

1.1 Provide for timely notification of appropriate individuals or organizations when the Shift Manager/Site Emergency Director (SED) has determined by EPIP-1 that an incident has occurred which is classified as a GENERAL EMERGENCY (GE)

1.2 Provide for periodic evaluation of the current situation by the Shift Manager/SED to determine whether the GE should be terminated, or continued

2.0 SCOPE

This procedure applies to emergency events that are classified as General Emergency by EPIP-1, Emergency Classification Procedure.

3.0 INSTRUCTIONS

Date: ____/____/____

3.1 **If** all Emergency Centers **ARE STAFFED, Then** notify the following that a **GENERAL EMERGENCY** Emergency Classification has been issued and EPIP 5 is being implemented, and continue in this procedure at Step 3.4 **If** all Emergency Centers **ARE NOT STAFFED, Then** N/A this step and continue in this procedure

				INITIALS	TIME
CECC	☐	Control Rooms	☐		
TSC	☐	Plant PA Announcement	☐		
OSC	☐	This is NAME, Site Emergency Director, an GE has been declared at BFN, we are currently implementing EPIP-5. Standby for further updates.			

3.2 **Notification of the Operations Duty Specialist (ODS) & Emergency Responders**

Note The ODS **should** be notified within 5 minutes after the emergency event is declared

3.2.1 **Complete** Attachment A (Initial Notification Form) _____ INITIALS _____ TIME

3.2.2 **Activating Emergency Response Organization (ERO)**

3.2.2.1 **If** ongoing/anticipated on-site security events may present a danger to the emergency responders, **Then** consult with Nuclear Security _____ INITIALS _____ TIME

3.2.2.2 **If** ongoing/anticipated events present a danger to emergency responders, **Then** direct the Unit 1 Unit Operator to make notifications per Attachment B and select "Staging Area" as the option for the Emergency Paging System _____ INITIALS _____ TIME

3.2.2.3 **If** there are no ongoing/anticipated danger to emergency responders, **Then** direct the Unit 1 Unit Operator to make notifications per Attachment B and select as applicable, "Drill" or "Emergency" as the option for the Emergency Paging System _____ INITIALS _____ TIME

3.0 INSTRUCTIONS (CONTINUED)

3.2.3 **Notify** the ODS and **Provide** the information from Attachment A

INITIALS _____ TIME _____

Note: Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS Telephone Numbers
5-751-1700, 2495

If the ODS cannot be reached within 10 minutes, **Then** contact the following and Provide the information from Attachment A

1. **Limestone County:** **9-232-0111** INITIALS _____ TIME _____
2. **Morgan County:** **9-1-256-432-2143** INITIALS _____ TIME _____
3. **Lawrence County:** **9-1-256-974-7641** INITIALS _____ TIME _____
4. **Lauderdale County:** **9-1-256-760-9117** INITIALS _____ TIME _____
5. **State of Alabama Rad Health Duty Officer:** INITIALS _____ TIME _____

Day Shift 8 a m - 5 p m (Central)	Holidays-Weekends-Off-Shifts
Primary: **9-1-334-206-5391**	Montgomery State Trooper Post
Backup: **9-1-800-582-1866**	**9-1-334-242-4378**

3.2.4 **Fax** a copy of Attachment A to the ODS for confirmation of information or the state if contacted directly. INITIALS _____ TIME _____

ODS Fax 5-751-8620
Office of Radiation Control Fax 9-1-334-206-5387

3.2.5 **Receive** confirmation call from the ODS (to verify notification of the State of Alabama), (N/A this step if the State was contacted directly) INITIALS _____ TIME _____

3.0 INSTRUCTIONS (CONTINUED)

3.3 NOTIFICATION OF SITE PERSONNEL

3.3.1 **Make** the following plant P.A announcement:

INITIALS _____ TIME _____

THIS IS (*NAME*), SHIFT MANAGER A GENERAL EMERGENCY HAS BEEN DECLARED ON UNIT ___. I HAVE ASSUMED THE DUTIES OF SITE EMERGENCY DIRECTOR. REPORT TO YOUR ASSIGNED EMERGENCY RESPONSE FACILITY AT THIS TIME.

CAUTION: Do not initiate Assembly and Accountability if:

1 A severe weather condition exist or projected on-site, such as a Tornado

2 An on-site security risk condition exists that may present a danger to site personnel during the assembly/accountability process (Consult with Nuclear Security).

3.4 ACCOUNTABILITY AND EVACUATION OF NON-EMERGENCY RESPONDERS

3.4.1 **If** Assembly and Accountability has not been conducted, **Then,** implement EPIP-8, Appendix C concurrently with this procedure **If** Accountability has been conducted, **Then,** continue in this procedure at step 3 4 2

INITIALS _____ TIME _____

3.4.2 **If** an order to evacuate non-emergency responders has not be issued, **Then** upon completion of Assembly and Accountability, Initiate the order to evacuate non-emergency responders, through the implementation of EPIP-8, Appendix F, concurrently with this procedure **If** the order to evacuate non-emergency responders has been conducted, **Then** continue in this procedure at step 3.5 1

INITIALS _____ TIME _____

3.0 INSTRUCTIONS (CONTINUED)

3.5 DOSE ASSESSMENT

3.5.1 Evaluate the need for offsite dose assessment. (N/A STEP IF NOT APPLICABLE) _____ INITIALS _____ TIME

3.5.1.1 **When** offsite dose assessment is required **Obtain** the information from the CECC when operational

3.5.1.2 If the CECC is not operational, **Contact** the TSC, when staffed or the RADCON Shift Supervisor and **Request** the implementation of EPIP 13, for dose assessment.

3.6 NOTIFICATION OF THE NRC

3.6.1 **Notify** the NRC immediately or within 1 hour and if requested by the NRC maintain an open and continuous communications channel. _____ INITIALS _____ TIME

Note: **Utilize** the Emergency Notification System (ENS) when making this notification Dial the first number listed on the sticker affixed to the ENS telephone, by dialing 9-1- "The Ten Digit Number Listed on the ENS Telephones". **If** the number is busy, **Then** select in order, the alternate numbers until a connection is achieved. No access codes are required

3.7 PROTECTIVE ACTION RECOMMENDATION

3.7.1 **If** the CECC is **not staffed**, **Then** make a Protective Action Recommendation (PAR) using Attachment C. (This PAR shall be made only by the SED.) (N/A STEP IF NOT APPLICABLE) _____ INITIALS _____ TIME

3.0 INSTRUCTIONS (CONTINUED)

3.8 PERIODIC EVALUATION OF THE EVENT

3.8.1 Continue to **Evaluate** the event using EPIP-1 as conditions warrant.

3.8.2 **If** plant conditions warrant the need for follow-up information, **Complete** the Follow-Up Notification Form, Attachment D.

Note: Conditions that warrant this evaluation are as a minimum when other EAL conditions exist indicating the current emergency classification or significant changes in plant conditions have occurred

3.8.3 **If** the CECC is not staffed, **Then** notify the ODS and provide follow up information from the completed Attachment D form. Utilize the direct ring-down ODS phone when making this notification or as applicable dial direct.

ODS - 5-751-2495, 1700

Note: **If** the ODS cannot be reached, **Then** contact the State of Alabama directly by requesting the Rad Health Duty Officer at:

Day Shift 8 a m - 5 p m (Central Time)		Holidays-Weekends-Off-shifts
Primary	9-1-334-206-5391	Montgomery State Trooper Post
Backup:	9-1-800-582-1866	9-1-334-242-4378

3.8.4 **If** the conditions warrant termination of the classification, **Then** enter EPIP-16, Termination and Recovery Procedure.

3.8.5 **After** the evaluation has been completed, if staffed, **Notify** the following of the status·

- CECC
- NRC (ENS)
- TSC
- OSC
- CONTROL ROOMS
- PLANT PA ANNOUNCEMENT

3.8.6 **Re-enter** this procedural section as conditions warrant at step 3 8 1 or until directed to exit this procedure by steps 3 8 4

3.0 INSTRUCTIONS (CONTINUED)

3.9 CLOSURE OF THE GENERAL EMERGENCY

		INITIALS	TIME
3.9.1	Upon termination of the Notification of General Emergency, the Shift Manager shall send the completed EPIP-5 and all attachments to Emergency Preparedness (EP)		
3.9.2	Upon receipt of completed EPIP-5 and all attachments, Emergency Preparedness shall forward documents for the purpose of documentation storage	INITIALS	TIME

4.0 ATTACHMENTS

Attachment A - Initial Notification Form General Emergency

Attachment B - Unit 1, Unit Operator Notifications

Attachment C - Protective Action Recommendations

Attachment D - Follow Up Information Form General Emergency

ATTACHMENT A (Page 1 of 1)
INITIAL NOTIFICATION FORM
GENERAL EMERGENCY

☐ THIS IS A REAL EVENT ☐ THIS IS A DRILL

This is _____
NAME

There has been a **GENERAL EMERGENCY** declared at Browns Ferry affecting

☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

Event Declared Time: _____ Date: _____

EAL Designator _____

Brief Description of the Event

_____

_____

_____

_____

Radiological Conditions:

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

The following Protective Action Recommendation is provided

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

Meteorological Conditions are:

Wind Speed _____ m p.h
Wind Direction From _____ degrees

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

ATTACHMENT B (Page 1 of 2)
UNIT 1, UNIT OPERATOR NOTIFICATIONS

Date: ____/____/____

NOTES: **(1)** The Emergency Paging System consists of a dedicated touch screen CRT. Activation of any screen feature requires the user place their fingertip within the boundary of the select button and leave it there for at least 1 second. The CRT Screen will normally display a large rectangle that indicates that the paging system is available but currently inactive.

(2) If the EPS fails to operate, contact the SM/SED immediately. Request that the ODS be contacted to initiate the system from his location. If the system fails to operate from the ODS area, then utilize the Weekly Duty List and Call-Out List to manually staff the Emergency Responders, implementing this attachment at step E.

1. Activation of the Emergency Paging System (EPS)

A. **PRESS** the EPS CRT Screen once to activate the paging options — **INITIALS** _____ **TIME** _____

B. **PRESS** the appropriate option — **INITIALS** _____ **TIME** _____
- PAGER TEST
- DRILL
- EMERGENCY
- STAGING AREA
- ABORT

C. **PRESS** the START Button to initiate the option or **ABORT** to deny the option request. — **INITIALS** _____ **TIME** _____

D **MONITOR** the Paging System Terminal Display — **INITIALS** _____ **TIME** _____

1. **IF**. . A "NO" response is observed
OR
The position being paged has not responded within approximately 20 minutes

THEN... Utilize the Weekly Duty List and attempt to contact the position representative with available information (No Fitness for Duty Question Required)

2. **IF**. . The individual cannot be reached utilizing the Weekly Duty List

THEN... Utilize the Call-Out List and attempt to contact an alternate position representative. (Fitness for Duty Question Required)

ATTACHMENT B (Page 2 of 2)
UNIT 1, UNIT OPERATOR NOTIFICATIONS

Date: ____/____/____

E Manual Call-Out (N/A step if EPS operates normally) — INITIALS _____ TIME _____

1 Utilize the current Weelky Duty List and contact positions as listed.

2 If a position can not be reached from the current Weekly Duty list, then refer to the Call-out List as applicable to fill all vacant positions

F. **CONTINUE** until all positions have been filled. — INITIALS _____ TIME _____

2. **Notify** the Unit Supervisors on shift. — INITIALS _____ TIME _____

3. **Notify** Nuclear Security Shift Supervisor and state "A GENERAL EMERGENCY HAS BEEN DECLARED" and direct to activate EPIP-11, Security and Access Control — INITIALS _____ TIME _____

   - Plant Extension 3150 or 2219

4. **Notify** the Chemistry Lab Supervisor and state "A GENERAL EMERGENCY HAS BEEN DECLARED" and direct to implement 2/3-TI-331, Post Accident Sampling Procedure and CI-900 series, Analysis Procedures — INITIALS _____ TIME _____

   - Plant Extension 2367 or 2368

5. **Notify** the RADCON Shift Supervisor and state "A GENERAL EMERGENCY HAS BEEN DECLARED" and direct to activate EPIP-14, Radiological Control Procedure. — INITIALS _____ TIME _____

   - Plant Extension 7865 or 3104

6. **Notify** the "On-Call" NRC Resident and state "A GENERAL EMERGENCY HAS BEEN DECLARED" — INITIALS _____ TIME _____

   - Plant Extension 2572 [Secretary] or from weekly duty list

ATTACHMENT C (Page 1 of 1)
PROTECTIVE ACTION RECOMMENDATIONS

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

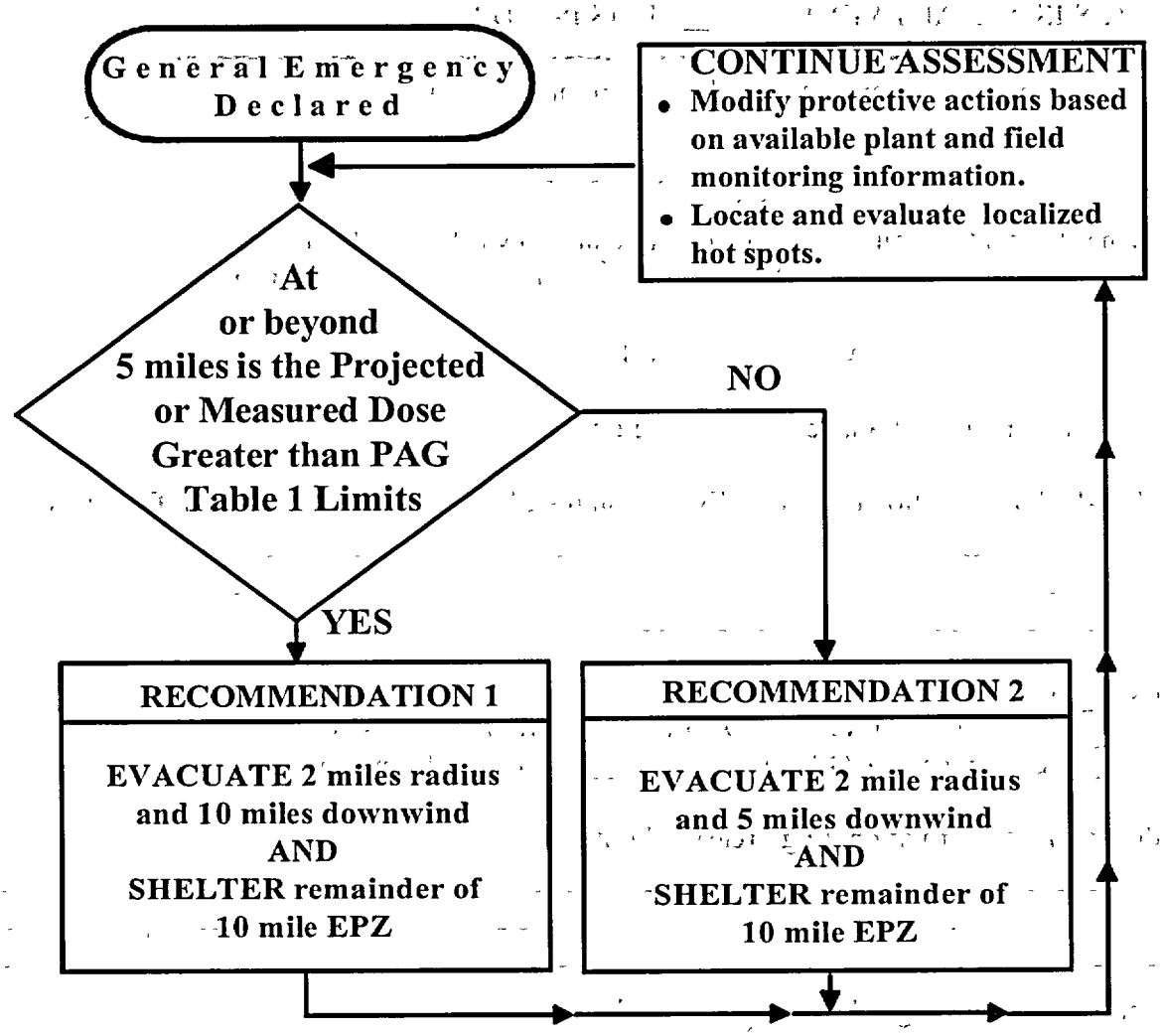


TABLE 1
Protective Action Guides

TYPE	LIMIT
Measured	3.9E-6 micro Ci/cc of Iodine 131 or 1 REM/hr External Dose
Projected	1 REM TEDE or 5 REM Thyroid CDE

ATTACHMENT D (Page 1 of 1)

FOLLOW-UP INFORMATION FORM

GENERAL EMERGENCY

☐ THIS IS A REAL EVENT ☐ THIS IS A DRILL

Note: This form is for conducting Follow-up Information only.

This is _____ at Browns Ferry
Name

There has been a General Emergency declared at Browns Ferry affecting

☐ Unit 1 ☐ Unit 2 ☐ Unit 3 ☐ Common

The Reactor is ☐ Shutdown ☐ At Power

Plant Conditions are ☐ Stable ☐ Deteriorating

"Follow-Up" Information (e g , Key Events, Status Changes, Status of any Plant Evacuations)

_____

_____

_____

Current Radiological Conditions are:

☐ No Abnormal Releases Offsite ☐ Airborne Release Offsite
☐ Liquid Release Offsite ☐ Release Information Not Known

Additional Rad information (e g , release duration)

_____

_____

_____

The current meteorological conditions from the site are:

Wind Speed _____, Wind Direction from _____

The following Protective Action Recommendation is provided.

☐ Recommendation 1
☐ Recommendation 2

Please repeat the information you have received to ensure accuracy

The time for this follow up is Time: _____ Date _____

SIGNATURE: _____

LAST PAGE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-6

ACTIVATION AND OPERATION OF THE TECHNICAL SUPPORT CENTER (TSC)

REVISION 22

PREPARED BY: TIM CORNELIUS PHONE 2038

RESPONSIBLE ORGANIZATION EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT V. LITTLE DATE: 10-25-2002

EFFECTIVE DATE: 10-29-2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number: EPIP-6 Revision Number: 22

Pages Affected: 3,4,16,23,26-30

Pagination Pages: NONE

Description of Change:

IC-25 This change is being conducted to revise the listing of TSC/OSC personnel necessary for meeting staffing requirements to declare the TSC Operational, remove information regarding the EP Call Out List, now contained in EPIP 17, revise the contingency section regarding the use of procedures, and human factors checklists to clarify responsibilities Additionally this revision will remove the Technical Assessor #3 position from the ERO staff

Page 1 - Remove information concerning the EP Call Out List The information is now contained in EPIP-17

Page 1 - This change removed the contingency for the use of procedures during declared radiological emergencies Information contain use of procedures during emergencies are contained in SPP 2.2 and OPDP-1.

Page 3 - Deleted the Technical Assessor #3 Checklist, Human Factored Attachment A title, and Re-lettered attachments

Page 4 - Human factored title of Attachment A

Page 5 - Revised listing of personnel required for the operational declaration of the TSC

Page 8 - Revised Operations checklist to more clearly identify the NRC Coordinator as the spokesperson for NRC communications within the site organization

Page 9 - Revised to update CECC Title Changes

Page 16 - Added information to responsibility section of the TSC Communicator checklist to more clearly identify responsibility of board writer

Page 21 - Revised to clarify responsibility of the Site VP regarding interface with news media

Page 19 - Removed Attachment N "Technical Assessor #3 Checklist"

Pages 19-26 - Re-Lettered Attachments

IC-26 Revision 22 is being conducted as a part of standardization EPIP-20 is being canceled EPIP-6 is being revised to include information from that procedure In addition to the standardization revision, page 4, Attachment A is being revised for human factors, per comments from operations JPM's.

ACTIVATION AND OPERATION OF THE TECHNICAL SUPPORT CENTER (TSC)

1.0 PURPOSE

The purpose of this procedure is to describe the activation of the Technical Support Center (TSC), and provide for TSC operation once it has been staffed. The TSC is staffed during an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY.

2.0 SCOPE

This procedure covers the emergency response from the TSC to support the shift operations staff during a radiological emergency, and direct the onsite response to the emergency.

3.0 INSTRUCTIONS

3.1 The TSC will be staffed by qualified members reporting to the TSC upon hearing the Site Accountability Alarm, Plant Public Address System, activation of the Automated Paging System (APS) or upon being called for duty by the Unit 1, Unit Operator.

3.2 Required Actions for activation and operation of the TSC

- All members of the TSC staff complete the appropriate attachment for your position.

3.3 Other Information

- A list of emergency organizational telephone numbers are contained in the Radiological Emergency Notification Directory (REND).

3.4 Contingencies

3.4.1 NRC order - The NRC role onsite is to observe, advise, and concur with licensee decisions and actions If a situation arises where the NRC wants an action taken regarding plant operation that TVA does not agree with, the SED shall require the NRC to sign a written order directing TVA to take the action before the SED will comply.

3.4.2 Evacuation - Relocate TSC to second level of office building. (Plant Manager's Office Area)

4.0 LONG TERM OPERATION

4.1 Long-term operation will be put into effect during an Alert, Site Area Emergency, or General Emergency which exists or is projected to exist for more than 12 hours.

4.2 The SED will notify the CECC of the decision to begin long-term operation

4.3 Meal periods will be scheduled at the request of the SED

4.4 Sleeping facilities will be established as necessary in the second floor of the Plant Administrative Building (outside the gatehouse) Nuclear Security (NS) Supervisor will provide access control (If radiological or other conditions do not permit this area to be used, provisions will be made through the CECC for near-site lodging, or for other sleeping area onsite)

4.5 The Operations Lunch Room in the control bay at Elevation 3C will serve as an assembly room for meetings, etc. The plant assembly room can also be used if additional space is needed and radiological conditions exist

4.6 Additional personnel will be called in at the request of the SED to provide coverage or to ensure 12-hour or shorter shifts in the TSC

4.7 The SED, through the OSC Director, will establish 12-hour (or shorter) shifts for their craft personnel onsite and call in additional personnel as necessary

4.8 Following the immediate actions required for mitigating the accident, the need for additional actions for long-term operation should be appraised Actions required for long-term operation shall include evaluation of the following

- Diesel Generator fuel oil levels and usage rates
- Containment Atmosphere Dilution nitrogen tank level
- Reactor Building basement (and other Class I structures) for water accumulation
- Standby Gas Treatment filter/charcoal replacement needs

5.0 ATTACHMENTS

Attachment A - Initial Activation of TSC

Attachment B - Site Emergency Director Checklist

Attachment C - Operations Manager Checklist

Attachment D - RADCON Manager Checklist

Attachment E - Technical Assessment Manager Checklist

Attachment F - Maintenance Manager Checklist

Attachment G - Chemistry Manager Checklist

Attachment H - Nuclear Security Manager Checklist

Attachment I - Emergency Preparedness Manager Checklist

Attachment J - NRC Coordinator Checklist

Attachment K - TSC Communicator Checklist

Attachment L - Technical Assessor # 1 (Reactor Engineer) Checklist

Attachment M - Technical Assessor #2 (I&C Engineer) Checklist

Attachment N - Operations Specialist Checklist

Attachment O - Assistant RADCON Manager Checklist

Attachment P - Site Vice President Checklist

Attachment Q - Status Board Writer Checklist

Attachment R -Technical Assessment Team Leader Checklist

Attachment S - Site Engineering Manager Checklist

Attachment T - Control Room Communicator Checklist

Attachment U - Technical Support Center Clerk Checklist

Attachment V - Plant Parameter Data Sheets

ATTACHMENT A
(Page 1 of 1)
INITIAL ACTIVATION OF TSC

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign the EPIP-8, Appendix I "Accountability Roster" maintained in the effected Unit Control Room
___/___	Unlock TSC
___/___	Unlock all TSC Supply Cabinets (Key in SHIFT MANAGER Key Box)
___/___	Post and Maintain Plant conditions on a Status Board. (Obtain updates from control room personnel.)
	___ Emergency Classification
	___ Initiating Conditions
	___ Current unit status.

NOTE: Remain in TSC, until initial personnel arrive to man the TSC, report to SHIFT MANAGER for assigned duties

ATTACHMENT B
(Page 1 of 3)
SITE EMERGENCY DIRECTOR CHECKLIST

NOTE: (l) Maintain a log of activities and communications

Initials/Time **Initial TSC Activation**

___/___ Swipe into Accountability Card Reader.

___/___ Sign TSC Accountability Log Sheet.

___/___ Sign in on the Staffing Board.

___/___ Obtain complete turnover from the SHIFT MANAGER / SED (in the Control Room).

- Obtain copy of the SHIFT MANAGER / SED Log

___/___ Verify the TSC and OSC are ready for operation (when the following positions are staffed):

- Site Emergency Director
- Radcon Manager
- Operations Manager or Operations Specialist
- Technical Assessment Manager
  or
  Technical Assessment Team Leader
  or
  All of the or following
  Technical Assessor # 1
  OSC Mechanical Engineer
  OSC Electrical Engineer
- OSC Director
- Electrical Supervisor
- Mechanical Supervisor
- Instrument and Control Supervisor
- Radcon Manager (on shift)

ATTACHMENT B
(Page 2 of 3)
SITE EMERGENCY DIRECTOR CHECKLIST (Continued)

Initials/Time **Initial TSC Activation**

___/___ Assume responsibility as SED from SHIFT MANAGER/SED

___/___ Make the following announcement over the Emergency Center P A System.

This is **NAME**, I have assumed the responsibility of the Site Emergency Director I am declaring the TSC and OSC activated at **TIME**.

- This is an actual emergency (or exercise - if an exercise, we need to treat this exercise seriously as if it were a real emergency and take complete advantage of this exercise as a learning experience)
- Give plant status update

___/___ Have a plant wide P A announcement made that you have assumed responsibility

___/___ Establish communications with the CECC utilizing the direct ring-down phone or by dialing the director at 5-751-1614.

NOTE: (1) Maintain a log of activities and communications

ATTACHMENT B
(Page 3 of 3)
SITE EMERGENCY DIRECTOR CHECKLIST (Continued)

Initial TSC Activation

Operational Responsibilities

Follow appropriate EPIP steps for current Emergency Classification:

1. **EPIP-2**, "Notification of Unusual Event"
2. **EPIP-3**, "Alert"
3. **EPIP-4**, "Site Area Emergency"
4. **EPIP-5**, "General Emergency"

Directs onsite emergency accident mitigation activities

Consult with CECC Director and Site Vice President on significant events and their related impacts

Establish and maintain site priorities for accident mitigation

Initiates onsite protective actions

Turn over SED Log to TSC Clerk

Coordinates accident mitigation actions with the NRC

Initiates long term 24-hour accident mitigation operations

Responsible for the declaration of emergency classifications

Authorize Emergency Radiation Exposures (EPIP-15)

Makes final approval on entries into radiologicallly hazardous areas when Radcon recommends against entry.

Periodic Requirements

1. Reevaluate the event by using EPIP-1 at least every TWO HOURS or more frequently if conditions warrant
2. Ensure update announcements to TSC and Control Room staffs (periodically and as conditions warrant).
3. Ensure update announcements to plant workers over P.A System (periodically and as conditions warrant)
4. Ensure update status to OSC Director (periodically and as conditions warrant)
5. If CECC is not activated, make Protective Action Recommendations as needed.

When Severe Accident Management Guidelines are entered, assume decision maker duties (If Qualified)

ATTACHMENT C
(Page 1 of 1)
OPERATIONS MANAGER CHECKLIST

NOTE: (1) Maintain a log of activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on the Staffing Board
___/___	Establish communications with the Shift Manager in the Control Room
___/___	Establish communications with Operations OSC Manager in the OSC.
___/___	Assign knowledgeable individual (NRC Coordinator) to establish and maintain communications with the NRC via the Emergency Notification System (ENS) - as required

Operational Responsibilities

Directs operational activities.

Performs damage assessment and recommends solutions and mitigating action for operational problems

Provide current update status from the Control Room to the SED and the TSC Staff

Provide direction and control interface from the TSC to the Control Room

Provide assistance to the SED as needed.

Provide status updates to the OSC Operations Manager.

Ensure the Unit Status Boards and Equipment Status Board are maintained

Routinely update the SHIFT MANAGER and discuss priorities and status of OSC repair teams.

When Severe Accident Management Guidelines are entered assume evaluator duties (If Qualified).

ATTACHMENT D
(Page 1of 1)
RADCON MANAGER CHECKLIST

NOTE: (l) Maintain a log of activities and communications

Initials/Time **Initial TSC Activation**

___/___ Swipe into Accountability Card Reader.

___/___ Sign TSC Accountability Log Sheet

___/___ Sign in on the Staffing Board

___/___ Establish communications with RADCON OSC Manager.

___/___ Establish communications with plant monitoring van (if dispatched and CEOC or CECC is not staffed)

___/___ Provide someone to communicate with NRC on the Health Physics Network (HPN) phone, as required

___/___ Assign a RADCON Status Board writer.

Operational Responsibilities

Directs and/or performs assessment of inplant and onsite radiological conditions

Directs onsite RadCon activities.

Coordinates additional RadCon support with the CECC Radiological Assessment Manager.

Make recommendations for protective actions for onsite personnel.

Coordinates assessment of radiological conditions offsite with CECC Radiological Assessment Manager.

Makes final recommendation to SED for entries into radiological hazardous areas

Collects and Provides plant radiological data to Emergency Facilities as applicable

Provide assistance to the SED, as needed

Provide status update to the SED.

Provide updates to the RADCON OSC Manager.

Ensure maintenance of the RADCON Status Maps/Boards in the TSC

ATTACHMENT E
(Page 1of 1)
TECHNICAL ASSESSMENT MANAGER CHECKLIST

NOTE: (l) Maintain a log of activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on the Staffing Board
___/___	Establish communication with the Technical Assessment Team Leader
___/___	Assign a Technical Assessment Team member as a TSC Board Writer.
___/___	Direct the TSC communicator to begin Monitoring SPDS and support status board collection or begin completing applicable portions of EPIP-20, Plant Data if SPDS is inoperable

Operation Responsibilities

Provide information, evaluations, and projects to the SED

Directs onsite effluent assessment

Keeps assessment team informed of plant status

Directs activities of the Technical Assessment Team.

Communicate with the CECC Plant Assessment Manager

Coordinates assessment activities with the CECC plant assessment team

Ensures that Plant Status and Trend Boards are maintained.

Projects future plant status based on present plant conditions

Provide assistance to the SED, as needed

When Severe Accident Management Guidelines are entered assume evaluator duties (If Qualified)

ATTACHMENT F
(Page 1 of 1)
MAINTENANCE MANAGER CHECKLIST

NOTE (l) Maintain a log of all activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign TSC Accountability Log Sheet.
___/___	Sign in on the Staffing Board
___/___	Establish Communication with OSC Team Manager, OSC Director and Assistant Director.
___/___	Obtain a turnover of damage assessment and repair activities.

Operational Responsibilities

Directs repairs and corrective actions

Performs damage assessment

Directs activities of the Operation Support Center.

Make team assignments to OSC Team Manager.

Provide update OSC status to the SED

Provide assistance to the SED as needed.

Provide status to the OSC Director

Ensure OSC and TSC status boards are consistent

Provide TSC personnel with a debriefing summary for each returning OSC team.

Communicate with the Assistant OSC director on matters concerning equipment and/or plant assessments

ATTACHMENT G
(Page 1of 1)
CHEMISTRY MANAGER CHECKLIST

NOTE: (l) Maintain a log of activities and communications

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on the Staffing Board
___/___	Establish communication with the Chemistry Manager in the OSC.
___/___	Establish communication with the CECC Rad Assessment Coordinator
___/___	Confirm the Emergency Data Information System is in operation

Operational Responsibilities

Coordinates assessment of radioactive effluents with CECC Plant Assessment Team

Collect Meteorological Data.

Maintain Release Status Board (jointly with RADCON)

Provide direction of Post Accident Sampling Activities.

NOTE: Ensure that plant configurations that are prerequisite to performing sampling have been completed prior to requesting a sample. The three hour time requirement begins upon a sample request, however, a request to prepare a team for sampling does not initiate the clock. Sampling teams should not be assigned a tracking number until the team is officially requested

Provide assistance to the SED as needed

Provide status updates to the SED.

Directs activities of the radiochemical laboratory and provides status update to the Chemistry Manager in the OSC

Determines impact of incident on environment, radwaste, various effluent treatment systems

ATTACHMENT H
(Page 1of 1)
NUCLEAR SECURITY MANAGER CHECKLIST

NOTE: (l) Maintain a log of activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on the Staffing Board.
___/___	Obtain status of site accountability.
___/___	Ensure accountability status is reported to the SED within 30 minutes of initiating accountability
___/___	Assist in organizing search teams if needed.
___/___	Restrict access to the protected area except for personnel whose name appears on the Emergency Access List or as authorized by the SED
___/___	Close all site access control points, which control personnel entering or leaving the site. Only personnel authorized by the Emergency Access List or the SED will be allowed to enter.
___/___	When SAE or GE level emergencies have been declared no personnel except those who have, (1) been authorized by the SED, (2) accounted for by Nuclear Security and, (3) monitored by RADCON will be allowed to leave the site.

Operational Responsibilities

Directs activities of Nuclear Security personnel.
Controls Access to Site and Control Rooms.
Reports on site accountability / evacuation as defined in BFN-EPIP's
Provide update status to Security Shift Supervisors.
Provide update status to SED.
Provide assistance to SED as needed.

ATTACHMENT 1
(Page 1of 1)
EMERGENCY PREPAREDNESS MANAGER CHECKLIST

NOTE: (l) Maintain a log of activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader
___/___	Sign TSC Accountability Log Sheet.
___/___	Sign ın on the Staffing Board.
___/___	Call Clerical Support personnel.
___/___	Confirm all TSC and OSC positions are filled and SED informed. (Notify the Unit 1, Unit Operator when TSC and OSC are staffed)
___/___	Correct any activation problems
___/___	Confirm all "Initial TSC Activation" items are completed for all TSC positions.

Operational Responsibilities

Advises SED regarding overall radiological emergency plan, use of implementing procedures, emergency equipment availability, and coordinatıon with CECC

Confirms site emergency centers are operating properly

Provide assistance to the SED as needed

Deactivation of the TSC

- Collect all logs and information forms from all staff members ın the TSC.
- Place the TSC in a ready state

ATTACHMENT J
(Page 1of 1)
NRC COORDINATOR CHECKLIST

NOTE: (l) Maintain a log of activities and communications

Initials/Time **Initial TSC Activation**

___/___ Swipe into Accountability Card Reader.

___/___ Sign TSC Accountability Log Sheet.

___/___ Sign in on the Staffing Board.

Operational Responsibilities

Acts as primary liaison with onsite NRC personnel.

Update NRC Personnel on plant status

Provide information requests from NRC to TSC personnel.

ATTACHMENT K
(Page 1of 1)
TSC COMMUNICATOR CHECKLIST

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on Staffing Board.
___/___	Ensure operability of SPDS in the TSC

Operational Responsibilities

Maintain the Main SPDS terminal in the TSC in support of staff needs

Support the status board writers in maintaining parameter and parameter trend board information

Provides information from the control room to the Technical Assessment team as needed

If SPDS or all electronic means for displaying plant parameter data becomes unavailable then, complete plant parameter data sheets, Attachment V of EPIP-6 every one-half hour or more frequently if required. Record data pertinent to the emergency or as prescribed by the TSC

As data sheets are completed carry them to the TSC Clerical Staff for distribution

If assigned as a TSC Status Board Writer follow these instructions

- Monitor communications via the operations party line
- Maintain the following status boards
  - Affected Unit
  - Trend Boards Technical
  - Assessment Parameter

ATTACHMENT L
(Page 1of 1)
TECHNICAL ASSESSOR # 1 CHECKLIST
(REACTOR ENGINEER)

NOTE: (l) Maintain a log of activities and communications

Initials/Time — Initial TSC Activation

___/___ Swipe into Accountability Card Reader.

___/___ Sign TSC Accountability Log Sheet.

___/___ Sign in on Staffing Board

___/___ Obtain needed documents and set up in the Technical Assessment Team Area

Operational Responsibilities

Completes trend graphs as needed

Provides the TSC staff and CECC Plant Assessment Team with current assessments on plant conditions

Project future plant status based on current conditions

Provide Technical Support as needed.

When Severe Accident Management Guidelines are entered report to the TSC and assume evaluator duties (If Qualified).

ATTACHMENT M
(Page 1of 1)
TECHNICAL ASSESSOR # 2 CHECKLIST
(INSTRUMENTATION AND CONTROL ENGINEER)

NOTE: (l) Maintain a log of activities and communications

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on Staffing Board
___/___	Obtain needed documents and set up in the Technical Assessment Team Area

Operational Responsibilities

Completes trend graphs as needed.

Provides the TSC staff and CECC Plant Assessment Team with current assessments on plant conditions.

Project future plant status based on current conditions

Provide Technical Support as needed

When Severe Accident Management Guidelines are entered report to the TSC and assume evaluator duties (If Qualified).

ATTACHMENT N
(Page 1of 1)
OPERATIONS SPECIALIST CHECKLIST

NOTE: (l) Maintain a log of activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign TSC Accountability Log Sheet.
___/___	Sign in on Staffing Board.
___/___	Establish communications with Control Room Communicator in the Control Room and OSC Operations Manager via party line.

Operational Responsibilities

Provides operational knowledge for status evaluation of plant systems

Provides advice regarding technical specifications, system response, safety limits, etc..

Assists in development of recommended solutions to developing problems

Provide plant data to the TSC Staff and to the Shift Manager. (Use party line)

Provide Assistance to the SED as needed

When Severe Accident Management Guidelines are entered assume evaluator duties (If Qualified)

ATTACHMENT O
(Page 1of 1)
ASSISTANT RADCON MANAGER CHECKLIST

NOTE: (l) Maintain a log of activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign TSC Accountability Log Sheet.
___/___	Sign in on Staffing Board
___/___	Begin providing information for the TSC RADCON Status Board writer

Operational Responsibilities

Provide Radiological Data to the RADCON Manager

Assist the Chemistry Manager in maintaining the Release Status Board.

ATTACHMENT P
(Page 1of 1)
SITE VICE PRESIDENT CHECKLIST

NOTE: (l) Maintain a log of activities and communications

Initials/Time	**Initial TSC Activation**
___/___	Swipe into Accountability Card Reader.
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on Staffing Board

Operational Responsibilities

Provides TVA policy direction to the Site Emergency Director (SED).

Directs the site resources to support the SED in the accident mitigation activities.

Interface with News Media through the Information Officer.

Assist the SED as needed.

At his discretion, may provide interface at the appropriate offsite location on the overall site response activities with, State and local agencies, NRC region/corporate, and Joint Information Center.

Provide direct interface on overall site response activities with NRC, FEMA, or other Federal organizations responding to the site.

Provides direct interface on overall site response activities with the CECC Director and onsite media.

Provides support to the other emergency operation centers as necessary.

ATTACHMENT Q
(Page 1of 1)
STATUS BOARD WRITER CHECKLIST
(Unit/Equipment Boards)

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader
___/___	Sign TSC Accountability Log Sheet
___/___	Sign in on Staffing Board
___/___	Establish communications with OSC status Board writers

Operational Responsibilities

Maintain the following Status Boards

- Equipment Problems
- Unaffected Unit
- Team Tracking

ATTACHMENT R
(Page 1of 1)
TECHNICAL ASSESSMENT TEAM LEADER CHECKLIST

NOTE: (l) Maintain a log of activities and communications

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader
___/___	Sign the TSC Accountability Log Sheet.
___/___	Sign in on the Staffing Board
___/___	Report to Technical Assessment Team Area.
___/___	Establish communications with the Plant Assessment Team in the CECC
___/___	Assign a technical assessor position to monitor the operation communication bridge.

Operational Responsibilities

Performs systems assessment as directed by Technical Assessment Manager.

Determines condition of Reactor and Nuclear Fuel

Acts as Plant Assessment Team Leader

Provide updated information to the Plant Assessment Team.

Provide detailed technical assessments and recommendations to the TSC

When Severe Accident Management Guidelines are entered remain in technical assessment team area and assume evaluator duties (If Qualified).

If plant parameter data cannot be displayed electronically, then assign the TSC Communicator to obtain plant parameter data utilizing Attachment V, of this procedure

ATTACHMENT S
(Page 1of 1)
SITE ENGINEERING MANAGER CHECKLIST

NOTE: (l) Maintain a log of activities and communications

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign the TSC Accountability Log Sheet
___/___	Sign in on the Staffing Board
___/___	Report to the Technical Assessment Team Area.

Operational Responsibilities

Serves as the primary interface with Engineering.

Serve as a member of the Technical Assessment Team.

Provide Engineering Support to TSC

ATTACHMENT T
(Page 1of 1)
CONTROL ROOM COMMUNICATOR CHECKLIST

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign the TSC Accountability Log Sheet
___/___	Sign in on the Staffing Board.
___/___	Report to the affected Unit Control Room.
___/___	Establish Communications with the Operations Specialist (use party line).

Operational Responsibilities

Provide updated plant parameters and status over the telephone to the Operations Specialist, Technical Assessment team areas and OSC operations personnel

When Severe Accident Management Guidelines are entered remain in the control room and assume evaluator duties (If Qualified).

ATTACHMENT U
(Page 1 of 1)
TECHNICAL SUPPORT CENTER CLERK CHECKLIST

NOTE Maintain a log of activities and communications.

Initials/Time	Initial TSC Activation
___/___	Swipe into Accountability Card Reader.
___/___	Sign the TSC Accountability Log Sheet.
___/___	Sign in on the Staffing Board
___/___	Check the operability of the copy machine.

Operational Responsibilities

Maintain log of events

Answer telephones

Operate facsimile machine

Other duties as assigned by the Site Emergency Director

Provide clerical support to the TSC Staff.

Maintain official SED Log

As requested copy and distribute Plant Parameter Data Sheets to members of the TSC, fax a copy of the information to the OSC and CECC

ATTACHMENT V
(Page 1 of 4)
PLANT PARAMETERS DATA SHEETS FOR UNIT 2/3

UNIT ____ Time _____ Date _____

Parameter	Reading	Instrument	Panel
Reactor Power		9-5 Operator	9-5
Reactor Water Level Emergency System Range		LI-3-58A/B (-155 to 60 inches)	9-5A
*Reactor Water Level (Accident Range)		LI-3-62A/52 (-268 to +32 inches)	9-3E
Reactor Pressure Wide Range		PI-3-54/61/207 (0-1500 psig)	9-5A
Drywell Pressure (Wide Range)		XR-64-159 Green Pen/160A (0-300 psig)	9-3E/3B
Drywell Temperature		XR-64-50 (TE-64-52C) Red Pen (0° to 400° F)	9-3B
SUPPR CHBR PRESS		PT-64-51(XR-64-52 green pen)	9-3B
SUPPR Pool Water Level (Wide Range)		XR-64-159 Red Pen/159A (0-20 ft)	9-3E/3C
SUPPR Pool Water Temperature		TR-64-161/162 (30-230°F) Green Pen	9-3D/3E
SUPPR CHBR Air Temperature		XR-64-52 (TE-64-52B) (0-400° F) (Red Pen)	9-3B
MSIV status	**OPEN/CLOSED**	(Circle Position)	9-3A
Reactor Recirc Pumps In Service	**A / B / NONE**	(Circle Pumps Running)	9-4

* Mark N/A if instrument pegged high

ATTACHMENT V
(Page 2 of 4)
PLANT PARAMETERS DATA SHEETS FOR UNIT 2/3

UNIT ____ Time _____ Date _____

NON Affected Unit Status	
UNIT 1 / 2 / 3 **(Circle Unit)**	MODE 1 / MODE 3 / SHUTTING DOWN **(Circle Condition)**
UNIT 1 / 2 / 3 **(Circle Unit)**	MODE 1 / MODE 3 / SHUTTING DOWN **(Circle Condition)**

Parameter	Reading	Instrument	Panel
FEEDWATER		FI-3-78A + FI-3-78B (LBS/HR)	9-5
*HPCI System Flow Mode ☐ Injection ☐ Pressure Control		FIC 73-33 (0-6000 gpm)	9-3F
*RCIC System Flow Mode ☐ Injection ☐ Pressure Control		FIC 71-36A (0-700 gpm)	9-3C
*RHR Sys I Flow Mode ☐ LPCI ☐ Torus Cooling ☐ Torus Spray ☐ Drywell Spray ☐ Shutdown Cooling		FI 74-50 (0-25,000 gpm)	9-3D
*RHR Sys II Flow Mode ☐ LPCI ☐ Torus Cooling ☐ Torus Spray ☐ Drywell Spray ☐ Shutdown Cooling		FI 74-64 (0-25,000 gpm)	9-3E
Core Spray Sys I Flow		FI 75-21 (0-10,000 gpm)	9-3C
Core Spray System II Flow		FI 75-49 (0-10,000 gpm)	9-3F

* Check MODE or STATUS for injection systems

ATTACHMENT V
(Page 3 of 4)
PLANT PARAMETERS DATA SHEETS FOR UNIT 2/3

UNIT ___ Time _____ Date _____

Parameter	Reading	Instrument	Panel
(1)(2) Suppression Chamber H_2 conc.		H_2 R 76-37 or 39 (%) Green pen	9-54, 55
(1)(2) Suppression Chamber O_2 conc.		O_2 R 76-41 or 43 (%) Green pen	9-54, 55
(1)(2) Drywell H_2 conc		H_2 R 76-37 or 39 (%) Red pen	9-54, 55
(1)(2) Drywell O_2 conc.		O_2 R 76-41 or 43 (%) Red pen	9-54, 55

NOTE (1) HS-76-49 and HS-76-59 must be checked to determine what recorder pens are active
NOTE (2) HS-76-72(82) and HS-76-73(83). Analyzer A(B) O_2 Range and Analyzer A(B) H_2 Range, must be checked to determine appropriate scale to read.

Parameter	Reading	Instrument	Panel
Drywell Radiation		RM-90-272A/RR-90-272 (red pen)(0-10^6 R/hr)	9-54
Drywell Radiation		RM-90-273A/RR-90-273 (red pen)(0-10^6 R/hr)	9-55
SUPPR CHBR Radiation		RM-90-272B (0-10^6 R/hr)	9-54
SUPPR CHBR Radiation		RM-90-273B (0-10^6 R/hr)	9-55
Stack Gas Radiation		0-RR-90-147 Red pen (Cps) (From Unit 1 only)	1-9-2
Stack Gas Radiation		0-RR-90-148 Black pen (Cps) (From Unit 1 only)	1-9-2

ATTACHMENT V
(Page 4 of 4)
PLANT PARAMETERS DATA SHEETS FOR UNIT 2/3

UNIT ____ Time _____ Date _____

Parameter	Reading	Instrument	Panel
OFFGAS STACK RADIATION MONITOR (WRGERMS) Noble Gas		0-RM-90-306	2-9-10
BLDG Release Fraction		(Gas Log/Log AUO)	Unit 1
Stack Gas Flow		0-FI-90-271 (0-56,000 scfm) (From Unit 1 only)	1-9-53
SGTS-1 + 2 Flow to Stack		(0-FI-65-50-2)+(0-FI-65-71-2) (0-15,000 scfm)	2-9-25

Other Parameters As Specified	Reading	Instrument	Panel

Remarks _____

After completion, carry to secretary in the TSC for distribution.

LAST PAGE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-7

ACTIVATION AND OPERATION OF THE OPERATIONS SUPPORT CENTER (OSC)

REVISION 20

PREPARED BY: TIM CORNELIUS PHONE 2038

RESPONSIBLE ORGANIZATION. EMERGENCY PREPAREDNESS

APPROVED BY GILBERT LITTLE DATE: 10/18/2002

EFFECTIVE DATE: 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number EPIP-7 Revision Number 20

Pages Affected: 12.19

Pagination Pages All

Description of Change

IC-22 This revision is being conducted to correct minor changes to the procedure
Page 5 - is being revised to correct page of attachment
Page 6 - is being conducted remove a note referring to operations support, establishing the OSC initially
Page 29 - is being revised to update the OSC layout.

IC-23 This revision is being conducted to revise the chemistry lab supervisor checklist and OSC Chemistry Manager checklist to include the items being removed from the revision of EPIP-13.

1.0 PURPOSE

1.1 The purpose of this procedure is to describe the activities of the Operations Support Center (OSC) and the assessment and repair activities during a radiological emergency.

2.0 Scope

2.1 The procedure covers the emergency response from the OSC during an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY.

3.0 INSTRUCTIONS

3.1 The OSC will be staffed by qualified members reporting to the OSC and staging area upon hearing the Site Accountability Alarm, Plant Public Address System, upon activation of the Automated Paging System (APS), or upon being called for duty by the Unit 1, Unit Operator.

NOTE: Refer to EPIP-8, Personnel Accountability and Evacuation

3.2 The OSC is located in two locations.

- The OSC is located on elevation 580' Service Building.
- The OSC staging area located on elevation 565' of the Service Building Maintenance Lunch Room area.

NOTE: If necessary to evacuate the OSC, relocate to the second level of the Plant Office Building (Plant Manager's Office area)

3.0 INSTRUCTIONS (CONTINUED)

3.3 Operation of The OSC

3.3.1 Normal plant maintenance procedures will be followed whenever possible. Should a situation arise where normal procedures would be inappropriate, maintenance will be performed as determined by the SED. If a situation is encountered in the field that threatens the safety of any team member, the Team Leader shall take appropriate action to prevent injury

3.4 Required Actions for Activation and Operation of the OSC

3.4.1 All members of the OSC staff complete the appropriate attachment for your position

4.0 LONG-TERM OPERATION

4.1 Upon receiving information from the TSC that emergency operation is expected to extend past 12 hours, the OSC Director will arrange to set up shift rotations

NOTE: Calling in additional personnel may be necessary.

5.0 Attachments

Attachment A - Team Tracking Form
Attachment B - OSC Director Checklist
Attachment C - RADCON OSC Manager Checklist
Attachment D - Fire Protection OSC Manager Checklist
Attachment E - Chemistry OSC Manager Checklist
Attachment F - Operations OSC Manager Checklist
Attachment G - Instrumentation and Controls OSC Supervisor Checklist
Attachment H - Mechanical OSC Supervisor Checklist
Attachment I - Electrical OSC Supervisor Checklist
Attachment J - RADCON Lab Supervisor Checklist
Attachment K - Fire Protection Shift Captain Checklist
Attachment L - Chemistry Lab Supervisor Checklist
Attachment M - OSC Engineer's Check List
Attachment N - OSC Staging Area Manager
Attachment O - Assistant OSC Director
Attachment P - OSC Clerk Checklist
Attachment Q - Status Board Writer
Attachment R - OSC Team Manager
Attachment S - Materials Coordinator
Attachment T - OSC Planners Checklist
Attachment U - OSC Document Control Checklist
Attachment V - OSC Configuration

ATTACHMENT A (Page 1 of 2)
TEAM TRACKING FORM

TEAM DESIGNATOR (A, B, C, etc.) _____ **TEAM PRIORITY (NA, 1, 2, 3, etc.)** _____

Team Manager _____/_____ *Initials* *Time*	**Team Task:** _____ _____ _____ **Associated TSC Priority:** _____ **Task Location: UNIT** ☐1 ☐2 ☐3 ☐Common ☐ Reactor Bldg., Elev. _____ ☐ Control Bay, Elev. _____ ☐ Diesel Bldg., Elev. _____ ☐ Turbine Bldg., Elev. _____ ☐ OTHER (Be Specific) _____ Elev. _____
Assist. Director _____/_____ *Initials* *Time*	**Responsible Section:** ☐ Electrical ☐ I&C ☐ RADCON ☐ Mechanical ☐ Operations ☐ Fire/Medical ☐ OTHER (Be Specific) _____ ☐ **OSC Center Announcement:** **Let me have your attention, Team (*Use Designator*) has been requested from the TSC to (*Describe Task*). (*Section Rep*) has been assigned to plan this task.**
Section Rep _____/_____ *Initials* *Time*	**Team Members** **Team Leader** _____ **Section:** _____ _____ **Section:** _____ _____ **Section:** _____ _____ **Section:** _____ _____ **Section:** _____ **Briefing Checklist** ☐ Description of Problem ☐ Key(s) Needed for Task ☐ Effected System Status ☐ Hazards to/from Work Site ☐ Procedures to be Used ☐ Safety Evaluation ☐ Drawings to be Used ☐ Operations Support ☐ Tools/Equipment Needed ☐ RADCON Support ☐ Clearances Needed ☐ RWP Required/Brief ☐ Route to/from Work Site ☐ Return as a team for De-Briefing **Communications:** ☐ **Hand-Held Radio, Channel-**_____ ☐ **Telephone, provide OSC Number-**_____ ☐ **Other-**_____
RADCON _____/_____ *Initials* *Time*	**RWP Utilized** ☐Yes ☐No If yes, RWP# _____ **Emergency Exposures Utilized** ☐Yes ☐No **(If Yes Approval Required, EPIP 15)** **Potassium Iodine Utilized** ☐Yes ☐No **(If Yes Approval Required, EPIP 14)**
OSC Director _____/_____ *Initials* *Time*	**Final Approval By OSC Director** ☐ **OSC Center Announcement:** **"Is there any reason that Team (*Use Designator*) should not be released at this time".**

ATTACHMENT A (Page 2 of 2)
TEAM TRACKING FORM

TEAM DESIGNATOR (A, B, C, etc.) _____ **TEAM PRIORITY (NA, 1, 2, 3, etc.)** _____

Section Rep _____/_____ *Initials* *Time*	**De-Briefing Summary Information** ☐ **Assignment Completed** ☐ **YES** ☐ **NO** ☐ **CANCELLED** ☐ **Equipment Status "As Left":** ☐ **Hazards Encountered (Actual or Potential)** ☐ **Equipment Clearance Status** ☐ **Unusual Sounds, Additional Radiological Information, Other Task Applicable Information** **DE-BRIEFING CLOSURE** ☐ **Inform OSC Director of Team De-Briefing Summary** ☐ **Direct Personnel to OSC STAGING AREA or Other** ☐ **Update OSC Team Tracking Board**
OSC Director _____/_____ *Initials* *Time*	☐ **TSC Notified. Team results provided to the TSC Maintenance Manager**

ATTACHMENT B (Page 1 of 3)
OSC DIRECTOR CHECKLIST

NOTE: Maintain a log of activities and communications

Initials/Time	**Initial OSC Activation**
____/____	Swipe into Accountability Card Reader
____/____	Sign the OSC Accountability Log Sheet
____/____	Sign in on the staffing board
____/____	Set up the OSC (assign any available personnel to assist) ° Configure OSC area an arrangement similar to EPIP-7, Attachment V ° Clear tables ° Ensure telephones are in proper location and operating. ° Open OSC supply cabinet ° Place notebooks in the proper position in the OSC ° Obtain needed documents
____/____	Inform the SHIFT MANAGER/SED of your location and status ___ Unit 1 2191/2192 ___ Unit 2 2291/2292 ___ Unit 3 2391/2392
____/____	Establish communication with the Maintenance Manager (TSC) (phone # 3766)
____/____	Establish communication with the OSC Staging Area Manager (phone # 2244)
____/____	Confirm the OSC is staffed (Notify the Maintenance Manager) (phone # 3766).

ATTACHMENT B (Page 2 of 3)
OSC DIRECTOR CHECKLIST (Continued)

Initials/Time **Initial OSC Activation (Continued)**

___/___ Make the following remarks prior to activating the OSC.

This is an actual emergency (or exercise - if an exercise, we need to treat this exercise seriously as if it were a real emergency and take complete advantage of this exercise as a learning experience).

Be Professional

- **Keep legible logs of all your activities.**
- **Be clear and precise in transfer of information.**
- **Make sure you are accurate with units as data are transferred.**
- **Keep noise level down as low as possible.**

___/___ Ensure that the Team Manager

☐ Tracks any team(s) dispatched prior to OSC activation

☐ Form initial response teams (see note below)

Operational Responsibilities

Provide Maintenance Manager with a debriefing summary for each returning repair/damage team

Direct OSC activities through the Assistant OSC Director

Communication with the SED as needed to ensure effective performance of the OSC.

Approve the dispatching of all teams.

Provide updates to the OSC personnel.

ATTACHMENT B (Page 3 of 3)
OSC DIRECTOR CHECKLIST (Continued)

Operational Responsibilities (Continued)

Provide updates to the OSC staging area personnel (approximately every one-half hour or as conditions warrant)

Ensure that all teams returning from assigned tasks are debriefed utilizing Attachment A of this procedure

NOTE: Initial response teams are as a minimum.

1. One Medical Emergency/Fire Response Team.
2. Two RADCON Survey Teams
3. One Post Accident Sampling Team.
4. Two repair teams (each consists of at least one Mechanical, one Electrical, one Operations, and one RADCON)
5. Turbine Building el 565' Tool Room.

   NOTE: If AREA is determined to be not habitable by Radcon discontinue this team #5.

ATTACHMENT C (Page 1 of 2)

RADCON OSC MANAGER CHECKLIST

NOTE: Maintain a log of activities and communications

Initials/Time	Initial Activation of the OSC
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Accountability Log Sheet.
____/____	Sign in on the staffing board
____/____	Establish communication with the RADCON Manager in the TSC.
____/____	Establish communication with the RADCON Lab Supervisor.
____/____	Ensure adequate RADCON staff available for OSC support.
____/____	Assign a RADCON Technician to the MERT.
____/____	Assign a RADCON status board writer.
____/____	Complete "Team Tracking Forms" (Attachment A) for all RADCON personnel dispatched prior to the OSC activation and give to the Assistant OSC Director.

Operational Responsibilities

Direct RADCON personnel in the RADCON lab.

Ensure all RADCON teams are dispatched through the OSC.

Provide assistance to the OSC Director, as needed.

Ensure as applicable that teams have RADCON coverage.

Brief the OSC Director of RADCON status

Brief the RADCON Superintendent in the TSC on status

ATTACHMENT C (Page 2 of 2)
RADCON OSC MANAGER CHECKLIST (Continued)

Operational Responsibilities (Continued)

Complete and update "Team Tracking Forms" (Attachment A) for RADCON teams you are assigned.

Ensure that all predressed OSC staging area teams are issued proper dosimetry and have been evaluated for radiological access (i.e. watch list)

Ensure technical briefing to OSC teams of radiological conditions prior to dispatch

ATTACHMENT D (Page 1 of 1)
FIRE PROTECTION OSC MANAGER CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Accountability Log Sheet.
____/____	Sign in on the staffing board
____/____	Establish communications with the Site Fire Protection Shift Captain and staff.
____/____	Complete "Team Tracking Forms" (Attachment A) for all Fire Protection Personnel dispatched prior to OSC activation and give to the Assistant OSC Director.

Operational Responsibilities

When possible allow Staging Area Fire Protection personnel to assist team in donning SCBAs

Provide and coordinate site Fire Protection resources as necessary to support the OSC Director

Assist in technical briefings of OSC teams as necessary.

Provide evaluations and projections on emergency air supplies.

Complete and update "Team Tracking Forms" (Attachment A) for MERT and fire fighting teams you are assigned.

Provide industrial safety support to the OSC Director as needed

Brief teams on industrial hazards as needed.

ATTACHMENT E (Page 1 of 1)
CHEMISTRY OSC MANAGER CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial Activation of the OSC
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Accountability Log Sheet.
____/____	Sign in on the staffing board.
____/____	Establish communication with the Chemistry Lab Personnel If no Chemistry Shift Supervisor is available in the lab, appoint a lead technician and call in the next shift Chemistry Supervisor.
____/____	Ensure adequate Chemistry staff is available to support the OSC
____/____	Complete "Team Tracking Forms" (Attachment A) for all Chemistry Personnel dispatched prior to OSC activation, and give to the Assistant OSC Director.
____/____	Inform Lab Supervisor or Lead Radiochemical Lab Analysis (LRLA) to have technicians swipe into the Accountability Card Reader in the RADCON Lab, Sign the Chemistry Lab Accountability Log Sheets review emergency sampling/analysis procedures and prepare for implementation.
____/____	Inform Lab Supervisor or Lead Radiochemical Lab Analysis (LRLA) to make preparations to implement 2/3 TI-331, Post Accident Sampling Procedure and CI-900 Series, Analysis Procedures

Operational Responsibilities

- Direct Chemistry assignments in the Chemistry lab.
- Ensure all Chemistry teams are dispatched through the OSC.
- Provide assistance to the OSC Director as needed
- Brief the OSC Director of Chemistry status.
- Complete and update "Team Tracking Forms" (Attachment A) for Chemistry teams you are assigned
- Obtain necessary post accident samples (as directed by the OSC Director). The three hour time requirement begins upon a sample requested by the SED, however, a request to prepare a team for sampling does not start the time period Sampling teams should not be assigned a tracking number until the sample is officially requested.

ATTACHMENT F (Page 1 of 1)
OPERATIONS OSC MANAGER CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign in on the staffing board.
____/____	Notify the OSC Director and Shift Manager (affected unit Control Room) upon arrival to the OSC.
____/____	Establish communications with the Operations Communicator utilizing the operations communications bridge.
____/____	Establish communications with supporting OSC Operations personnel (staging area).
____/____	Complete "Team Tracking Forms" (Attachment A) for all Operations Personnel dispatched prior to OSC activation, and give to the Assistant OSC Director. (EOI Activities)

Operational Responsibilities

Provide and coordinate operations personnel to support the OSC Director.

Provide operations support to OSC teams that are dispatched into the field

Perform any operations actions that may be required while in the field

Keeps the SHIFT MANAGER apprised of OSC team activities while in the field.

Complete and update "Team Tracking Forms" (Attachment A) for Operations teams you are assigned

Ensure the responsiveness of EOI field teams

ATTACHMENT G (Page 1 of 1)
INSTRUMENT AND CONTROL (I&C) SUPERVISOR CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Accountability Log Sheet
____/____	Sign in on the staffing board.
____/____	Notify the OSC Director upon arrival.
____/____	Establish communications with the supporting OSC I&C staff (staging area)
____/____	Complete "Team Tracking Forms" (Attachment A) for all I&C Personnel dispatched prior to OSC activation and give to the Assistant OSC Director.

Operational Responsibilities

Provide and coordinate I&C resources necessary to support the OSC Director and teams.

Provide technical assistance with I&C problems

Perform damage and repair assessments.

Assist in technical briefings of OSC teams as necessary.

Complete and update "Team Tracking Forms" (Attachment A) for I&C teams you are assigned.

ATTACHMENT H (Page 1 of 1)
MECHANICAL OSC SUPERVISOR CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Accountability Log Sheet.
____/____	Sign in on the staffing board.
____/____	Notify OSC Director upon arrival.
____/____	Establish communications with appropriate supporting OSC Mechanical staff (Staging Area)
____/____	Complete "Team Tracking Forms" (Attachment A) for all Mechanical Personnel dispatched prior to OSC activation and give to the Assistant OSC Director.

Operational Responsibilities

Provide and coordinate Mechanical Maintenance resources necessary to support OSC Director and teams

Provide technical assistance with mechanical system problems.

Perform damage and repair assessments.

Assist in technical briefings of OSC teams as necessary.

Complete and update "Team Tracking Forms" (Attachment A) for mechanical maintenance teams you are assigned.

ATTACHMENT I (Page 1 of 1)
ELECTRICAL OSC SUPERVISOR CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader
____/____	Sign the OSC Accountability Log Sheet.
____/____	Sign in on the staffing board.
____/____	Notify OSC Director upon arrival.
____/____	Establish communications with appropriate supporting OSC Electrical staff (staging area)
____/____	Complete "Team Tracking Forms" (Attachment A) for all Electrical Personnel dispatched prior to OSC activation.

Operational Responsibilities

Provide and coordinate Electrical Maintenance resources necessary to support OSC Director and teams.

Provide technical assistance with electrical system problems

Perform damage and repair assessments.

Assist in technical briefings of OSC teams as necessary.

Complete and update "Team Tracking Forms" (Attachment A) for Electrical Maintenance teams you are assigned.

ATTACHMENT J (Page 1 of 1)

RADCON LAB SUPERVISOR (RADCON LAB) CHECKLIST

NOTE: Maintain a log of activities and communications

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign RADCON lab Accountability Log Sheet
____/____	Establish communications with appropriate supporting RADCON Lab staff.

Operational Responsibilities

Provide and coordinate RADCON personnel necessary to support the OSC teams

Maintains an interface with the OSC RADCON Manager related to the radiological conditions in the plant.

Ensure that adequate dosimetry is maintained for OSC teams

ATTACHMENT K (Page 1 of 1)

FIRE PROTECTION SHIFT CAPTAIN (STAGING AREA) CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC staging area Accountability Log Sheet
____/____	Ensure all ESTS sign the OSC Staging area Accountability Log Sheet.
____/____	Notify Fire Protection Manager (OSC) upon arrival.
____/____	Establish communications with the site Fire Protection staff.

Operational Responsibilities

Monitor status of site Fire Protection/Life Safety systems and keep OSC Fire Protection Manager apprised.

Acts as Medical Emergency Response Team (MERT) Leader if EPIP-10 is implemented.

Keeps Fire Protection OSC Manager apprised as to status of emergency air supplies.

Directs the Fire Protection staff's activities when required to dispatch into the field for fire, medical, or other necessary support.

ATTACHMENT L (Page 1 of 1)

CHEMISTRY LAB SUPERVISOR (CHEMISTRY LAB) CHECKLIST

NOTE: Maintain a log of activities and communications

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader in the RADCON Lab.
____/____	Sign the Chemistry Lab Accountability Log Sheets
____/____	Ensure the condensate oxygen injection system has been isolated if installed on the affected unit
____/____	Establish communications with appropriate supporting Chemistry staff.
____/____	Ensure dose-rate monitoring instruments are functioning properly.
____/____	Have technicians swipe into the Accountability Card Reader in the RADCON Lab, Sign the Chemistry Lab Accountability Log Sheets review emergency sampling/analysis procedures and prepare for implementation.
____/____	Make preparations to implement 2/3 TI-331, Post Accident Sampling Procedure and CI-900 Series, Analysis Procedures.

Operational Responsibilities

Provide and coordinate Chemistry Lab necessary to support the OSC teams.

Assist in technical briefings of OSC teams as necessary

Obtain necessary post accident samples and performs analysis of samples (as directed by the OSC Director). The three hour time requirement begins upon a sample request by the SED, however, a request to prepare a team for sampling does not start the time period Sampling teams should not be assigned a tracking number until the sample is officially requested

Maintains an interface with the Chemistry OSC Manager and provides results of sample analysis in a timely manner.

If Radiochemical Lab becomes inhabitable, report to a location determined by RADCON and inform the OSC Chemistry Manager.

ATTACHMENT M (Page 1 of 1)
OSC ENGINEER'S CHECKLIST
(ELECTRICAL - MECHANICAL - INSTRUMENTATION AND CONTROLS)

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Accountability Log Sheet.
____/____	Sign in on the staffing board.

Operational Responsibilities

Provide engineering support to the OSC staff.

ATTACHMENT N (Page 1 of 1)
OSC STAGING AREA MANAGER

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Staging Area Accountability Log Sheet.
____/____	Assign a foreman to set up the OSC staging area, include the following.

- ☐ Ensure all personnel in the OSC staging area card into the Accountability Card Reader.
- ☐ Ensure all personnel in the OSC staging area sign the Accountability Log Sheet
- ☐ Unlock Supply Cabinet
- ☐ Install the OSC Staging Area Telephones

Operational Responsibilities

Maintain control in the OSC staging area

Assemble personnel and direct them to the OSC when requested

Ensure adequate man-power exist in the OSC staging area (i e. Radcon, AUO's, Electrical, etc personnel)

Inform OSC manager of all time delays in team assembly.

ATTACHMENT O (Page 1 of 1)
ASSISTANT OSC DIRECTOR CHECKLIST

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the OSC Accountability Log Sheet.
____/____	Sign in on the staffing board
____/____	Call Maintenance Planner.
____/____	Collect any completed Team Tracking Forms from OSC managers and route to OSC Team Manager.

Operational Responsibilities

Ensure status boards are kept current.

Assign tasks to appropriate OSC managers when directed by OSC Team Manager

Keep the OSC Director informed of task status.

Ensure the responsiveness of all personnel assigned to assemble and dispatch field teams.

ATTACHMENT P (Page 1 of 1)
OSC CLERK CHECKLIST

NOTE: Maintain a log of activities and communications

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the Accountability Log Sheet.
____/____	Sign in on the staffing board.

Operational Responsibilities

Maintain a log for the OSC Director.

Provide clerical support for the OSC and OSC Staging Area

ATTACHMENT Q (Page 1 of 1)
STATUS BOARD WRITER CHECKLIST

Initials/Time	**Initial OSC Activation**
____/____	Swipe into Accountability Card Reader.
____/____	Sign OSC Accountability Log Sheet
____/____	Sign in on Staffing Board.

Operational Responsibilities

Maintain the following Status Boards (As assigned)

- Affected Unit
- Equipment Problems
- Team Tracking

Obtain up-to-date plant data from the OSC Operations Communicator.

ATTACHMENT R (Page 1 of 1)
OSC TEAM MANAGER

NOTE: Maintain a log of activities and communications

Initials/Time	**Initial OSC Activation**
____/____	Swipe into Accountability Card Reader.
____/____	Sign the Accountability Log Sheet.
____/____	Sign in on Staffing Board.
____/____	Track any team(s) dispatched prior to the OSC activation.
____/____	Establish communications with the TSC maintenance manager (#3766)

Operational Responsibilities

Initiate team Tracking Forms as requested by TSC Maintenance manager and forward to Assistant OSC Director upon acknowledgment by the OSC director.

Ensure that the team tracking board is consistent and accurate and that the information is being transferred in a timely manner to the TSC team tracking board writer

ATTACHMENT S (Page 1 of 1)
MATERIALS COORDINATOR

NOTE: Maintain a log of activities and communications.

Initials/Time	**Initial OSC Activation**
____/____	Swipe into Accountability Card Reader.
____/____	Sign the Accountability Log Sheet.
____/____	Sign in on Staffing Board.
____/____	Track activities conducted prior to the OSC activation and report to director
____/____	Establish communications with Power Stores representative at Extension #2608.

Operational Responsibilities

Provide and coordinate material support resources necessary to support the Operation Support Center.

Provide technical assistance as applicable in regards to material acquisition, substitution, and availability

ATTACHMENT T (Page 1 of 1)
OSC PLANNERS CHECKLIST

NOTE: Maintain a log of activities and communications.

Initials/Time	Initial OSC Activation
____/____	Swipe into Accountability Card Reader.
____/____	Sign the Accountability Log Sheet.
____/____	Sign in on the staffing board.

Operational Responsibilities

Provide support to the OSC Staff as applicable.

Support in the Planning and briefing preparation for OSC Team

Complete and update "Team Tracking Forms" for teams you are assigned

ATTACHMENT U (Page 1 of 1)
OSC DOCUMENT CONTROL

NOTE: Maintain a log of activities and communications

Initials/Time	**Initial OSC Activation**
____/____	Swipe into Accountability Card Reader.
____/____	Sign the Accountability Log Sheet.
____/____	Sign in on the staffing board

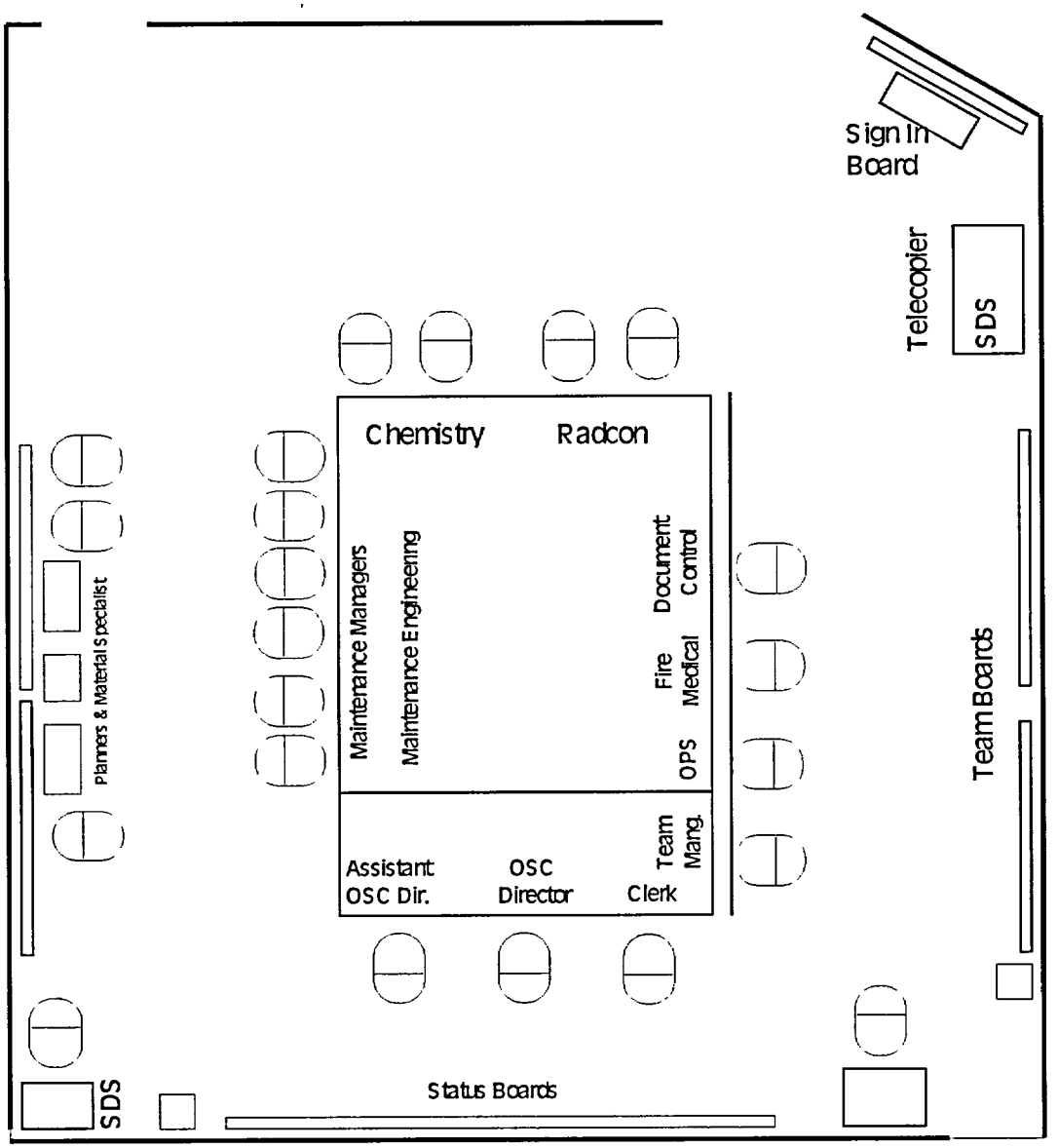
Operational Responsibilities

Provide document control support for the OSC and OSC Staging Area

Ensure that documents/drawings are maintained as utilized by OSC members

Ensure timely availability of procedures and drawings as requested by OSC members

ATTACHMENT V (Page 1 of 1)
OSC CONFIGURATION



TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-12

Emergency Equipment and Supplies
(Inventory and Operability Procedure)

REVISION 0

PREPARED BY: T. W CORNELIUS PHONE: 2038

RESPONSIBLE ORGANIZATION. EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT LITTLE DATE. 10/18/2002

EFFECTIVE DATE: 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

PROCEDURE NUMBER EPIP-12 REVISION NUMBER: 0

PAGES AFFECTED All

DESCRIPTION OF CHANGES:

IC-01 This revision is being conducted to renumber procedure which was EPIP-17 to EPIP-12 for standardization issues. Revised records section for standardization and removed FRED Manuals from the TSC inventories

1.0 PURPOSE

The purpose of this procedure is to provide a listing of equipment and supplies, along with storage locations, available for emergency response during the activation of the Radiological Emergency Plan and Emergency Plan Implementing Procedures. This procedure will ensure the availability and readiness of emergency equipment at BFN through the performance of periodic inventories and operability checks.

2.0 SCOPE

This procedure provides information pertaining to equipment and supplies available for use during emergencies at the Browns Ferry Nuclear Plant. This procedure additionally provides instructions to personnel performing checks of equipment and supplies in regards to frequencies, responsibilities, acceptance and record management.

3.0 INSTRUCTIONS

3.1 Responsibilities and Frequency

3.1.1 Inventories and operability checks shall be conducted in accordance with frequencies provided in *Attachment 1*. In addition with this frequency schedule, special inventories shall be required when items or equipment maintained by this procedure have been affected by a drill, exercise or training. This special inventory shall be performed at a reasonable time following the activity. This special inventory may also be used as the routine inventory.

3.1.2 Conduct of inventories and operability checks shall be the responsibility of the organization provided in *Attachment 1*.

3.1.3 The Manager, Emergency Preparedness (EP), is responsible for ensuring the overall state of readiness of supplies and equipment identified in the procedure.

3.1 Responsibilities and Frequency (Continued)

3.1.4 Individuals performing work within this procedure shall be familiar with all procedural guidance and testing requirements applicable to their assigned task. By initialing the item listing on the task form, the individual performing tasks within this procedure is responsible for ensuring the item is present, in the specified quantity and functional for its intended purpose

3.1.5 Equipment inventories and operability of the site environmental monitoring vans shall be conducted in accordance with *CECC-EPIP-9* Routine and special inventory/operability checks involving the site environmental monitoring vans are the responsibility of RADCON. Training personnel will be responsible for inventory and operability checks following training activities.

3.1.6 Personnel performing inventories and operability checks shall ensure that upon completion of task, seals or locking devices are in place to ensure the integrity of the equipment or supplies. Areas requiring these measures are listed on *Attachment 2*.

3.1.7 Personnel conducting inventories and operability checks in accordance with this instruction will ensure that the latest revision of this procedure is utilized.

3.1.8 Definition for annual and quarterly shall be as noted in the Radiological Emergency Plan Terms such as once every calendar quarter or month invokes that the task should be conducted within the timeframe of a physical quarter or month

3.2 Records Management

3.2.1 Personnel conducting tasks within this procedure will provide legible documentation of results on applicable forms

3.2.2 Upon completion of applicable task(s), originals with signatures, shall be forwarded to the Manager, EP for review and concurrence Originals should be forwarded as soon as possible, but no later than the end of the current quarter.

3.1 Records Management(Continued)

3.2.3 The Manager, EP shall review all task forms and concur with results by signature

3.2.4 EP shall maintain all procedure records for a minimum retention period of 3 years. These records are considered NON-QA

3.3 Task Deficiencies

Deficient items as discussed within this procedure do not relate to those described in SPP 3.1, "Corrective Action Program". Any deficient item identified within this procedure which does meet the requirements of SPP 3.1 shall be documented in accordance with SPP 3 1.

3.3.1 All task deficiencies shall be noted on the applicable task form.

3.3.2 All task deficiencies shall be corrected as soon as possible. If circumstances do not allow prompt correction the Manager, EP, shall be notified .When deficiencies have been corrected, the applicable task form shall be signed.

3.3.3 For failures of the, Emergency Telecommunications System (ETS) deficiencies will be reported immediately in accordance with the instructions provided on the applicable task form

3.4 Specific Instructions for Inventories, Operability Checks, Administrative Checks and Reviews

3.4.1 SCBA's

Self Contained Breathing Apparatus (SCBA) units are inventoried per this procedure for inventory purposes only Inspections/equipment maintenance and operability checks are conducted in accordance with applicable Fire Protection Instructions.

3.4.2 Radiological Control Instrumentation

3.4.2.1 On-Site - Survey instrumentation, counting equipment, air samplers, dosimeters and other radiological control equipment listed on applicable forms are for inventory purposes only Instrument readiness is a process of the on-site radiological control organization As a function of this inventory calibration due dates and instrumentation physical appearance will be observed to help ensure operability

3.4.2.2 Off-Site - Survey instrumentation and dosimeters referenced as offsite by this procedure are considered those maintained by EP at the BFN - Agreement Hospitals. Survey instrumentation operability shall be maintained by the Western Area Radiological Laboratory, Instrumentation Section. Electronic dosimeters shall be exchanged according to response dates not to exceed calibration due dates. Electronic dosimetry should be observed for physical damage to help ensure operability.

3.4.3 Telecommunications

3.4.3.1 Nuclear Regulatory Commission - Emergency Notification System telephones Lift the receiver and listen for a dial tone; after receiving a dial tone, dial 9-1 then first number listed on the sticker located on the telephone instrument, using all 10 digits. If the first number is busy, proceed on with the second, etc Confirm acceptable voice quality between parties conducting the test with all extensions off hook. Request a call-back be made to single phone and confirm acceptable voice quality

3.4 Specific Instructions for Inventories, Operability Checks, Administrative Checks and Reviews (Continued)

3.4.3 Telecommunications (Continued)

3.4.3.2 All other telecommunications tested by this procedure . Conduct the test by lifting receiver and listen for a dial tone; after receiving a dial tone, place a local call and request a call-back be made Confirm acceptable voice quality between telephones being tested.

3.4.4 TSC & OSC Intercom System

Activate the intercom system in the TSC or OSC. Assign someone to monitor the test in the applicable locations The TSC PA services the TSC, OSC and the Technical Assessment Team Area while the OSC PA services the OSC and OSC Staging Area

3.4.5 EP Clocks

Verify the correct operation of the TSC and the OSC clock by logging onto the clock program and making classification changes using the program. Return the system to the "No Classification" display

3.4.6 Telecopiers (TSC & OSC)

Verify operability by faxing a test message to another telecopier. Fax a test message back to the telecopier being tested. Check telecopier paper and physical condition Ensure legibility of test messages.

3.4.7 Telephone Headsets

Configure headset as applicable Make call and confirm acceptable voice quality using the microphone and ear piece.

3.4.8 Ring down Phones (CECC/TSC, TAT/Plt Assessment, ODS/Control Rooms 1/2 & 3)

Contact Corporate EP, have someone man the telephone in the CECC/ODS areas. Place a call to the CECC/ODS by lifting the receiver and receive a call form the CECC/ODS.

3.4 Specific Instructions for Inventories, Operability Checks, Administrative Checks and Reviews (Continued)

3.4.9 Meteorological (MET) Data Terminal and Printer

Log onto the MET terminal. Request information in printed format Verify that the printer has a supply of paper and that the print is legible Log off system.

3.4.10 OSC Computer & Printer (OSC)

Ensure the operability of the OSC computer by performing a task such as the activation of the word processing program. Check the response of the printer by requesting a print task via the computer, observe the action of the printer and print quality

3.4.11 Copiers (TSC/OSC)

Verify operability by copying a test message through the copier. Make copies using the sorter and verify legibility of copies, check copy paper supply and physical condition of copier.

3.4.12 Batteries

All batteries shall be observed for physical damage such as indentations, leaking or rust Batteries shall be tested to determine effectiveness by battery tester Batteries sealed by the manufacture with an affixed label indicating a "shelf life" can be exempted from the individual battery test and accepted as is, as long as the current date does not exceed the "shelf life" date. Sealed batteries which have a "shelf life" date that is exceeded by the current date can be utilized, but must pass a battery test utilizing the battery testor.

3.4.13 Zetron Radio Control Units (RCU)

Observe the unit to ensure that the time is displayed on the face plate. Verify that a green indicator light appears by one of the radio frequency selector buttons The RCU should be tested by contacting a normally manned station

3.4 Specific Instructions for Inventories, Operability Checks, Administrative Checks and Reviews (Continued)

3.4.14 Hand Held 2-Way Radios

Observe the unit for physical damage, then assemble one of the battery packs to the radio. Make radio contact with another hand held unit and verify acceptable voice quality.

3.4.15 Control Room Conference Bridge (101/102)

Activate the "2-Way" bridge by dialing 101 on two plant telephones. Verify acceptable voice quality. Then test the "Listen Only" bridge by having someone activate the "2-Way" bridge by dialing 101 and someone activate the "Listen Only" bridge by dialing 102. Verify that the 102 is a "listen Only" system

3.4.16 ERO Logbooks

Utilize EPIP-6 or 7, position attachments to identify what ERO logbooks are intended for use in the applicable centers. Review the logbooks to unsure that each contains:

(1) The latest revision of the applicable EPIP Attachment

(2) An adequate supply of log sheets

3.4.17 Calculators, Flashlights, etc.

Verify functional by observing anticipated response.

3.4.18 Emergency Procedure Telephone Number Review and Update

Certain EPIP's and site procedures contain telephone numbers utilized by response personnel. Once per calendar quarter these numbers will be reviewed to ensure accuracy and updates are made as applicable. Changes will be conducted in accordance with site instructions

3.4 Specific Instructions for Inventories, Operability Checks, Administrative Checks and Reviews (Continued)

3.4.19 Review of Emergency Procedures

In accordance with the Radiological Emergency Plan (REP) the REP, REP Appendices and the EPIPs shall be reviewed annually. Changes concerning the REP will be forwarded to the corporate EP staff for consideration and implementation as applicable Changes noted concerning the EPIPs shall be considered and if applicable revisions conducted in accordance with site instructions.

3.4.20 Emergency Response List

The Emergency Response List contains individuals which are allowed access to the protected area during an emergency at BFNP for the purposes of serving within the emergency response organization. This listing is updated quarterly and copies distributed to Nuclear Security. The list will be issued on white paper and will not require PORC review

3.4.21 Call-Out List

This list contains active Emergency Responders by emergency positions This list is utilized as a tool for the call-out of emergency responders The list is updated quarterly and will be issued on white paper The call-out list will not be PORC reviewed.

3.4.22 Procedures and/or Drawings

Controlled Procedures and/or drawings listed on applicable forms are for inventory purpose only. Procedure and Drawing inspection/maintenance process is conducted through applicable site instructions

4.0 ATTACHMENTS

4.1 Attachment 1	Inventory Matrix Table
4.2 Attachment 2	Locked/Sealed Cabinet Listing
4.3 Attachment 3	Radcon Emergency Equipment - Service Building 565'
4.4 Attachment 4	Radcon Emergency Equipment - Control Building 617"
4.5 Attachment 5	Staging Area C-Zone Dress-Out Clothing - Service Building 565'
4.6 Attachment 6	Emergency Use SCBA Inventory
4.7 Attachment 7	Maintenance Emergency Tool Box Inventory, Clean Tool Room - Service Building 565'
4.8 Attachment 8	Technical Support Center Inventory/Operability Check
4.9 Attachment 9	Operations Support Center Inventory/Operability Check
4.10 Attachment 10	OSC Staging Area Inventory/Operability Check
4.11 Attachment 11	Huntsville/Decatur General Hospital Inventory/Operability Checks
4.12 Attachment 12	ETS Communications Operability Checks
4.13 Attachment 13	Local Recovery Center Inventory/Operability Checks
4.14 Attachment 14	EP Quarterly Administrative Checks and Reviews
4.15 Attachment 15	EP Once per Calendar Quarter Administrative Checks and Reviews
4.16 Attachment 16	EP Annual Administrative Checks and Reviews
4.17 Attachment 17	Alternate Decontamination Facility
4.1 Attachment 18	Personnel Decontamination Treatment Area

Attachment 1
Inventory Matrix Table

EPIP Attachment Number	Description	Responsible Section	Frequency	Specific Instructions Provided
3	*Radcon Emergency Equipment - Service Building 565'*	Radcon	Once every calendar quarter	Yes
4	*Radcon Emergency Equipment - Control Building 617'*	Radcon	Once every calendar quarter	Yes
5	*Staging Area C-Zone Dress-Out Clothing Service Building 565'*	Radcon	Once every calendar quarter	Yes
6	*Emergency Use SCBA Inventory*	Operations	Once every calendar quarter	Yes
7	*Maintenance Emergency Tool Box Inventory, Clean Tool Room - Service Building*	Maintenance	Once every calendar quarter	
8	*Technical Support Center Inventory Operability Check*	EP	Once every calendar quarter	Yes
9	*Operations Support Center Inventory Operability Check*	EP	Once every calendar quarter	Yes
10	*OSC Staging Area Inventory Operability Check*	EP	Once every calendar quarter	Yes
11	*Huntsville Decatur General Hospital Inventory Operability Checks*	EP	Once every calendar quarter	Yes
12	*ENS Monthly Communications Operability Check*	EP	Once monthly	Yes
13	*Local Recovery Center Inventory Operability Check*	EP	Once every calendar quarter	Yes
14	*EP Quarterly Administrative Checks and Reviews*	EP	Once quarterly	Yes
15	*EP Once per Calendar Quarter Administrative Checks and Reviews*	EP	Once every calendar quarter	Yes
16	*EP Annual Administrative Checks and Reviews*	EP	Once annually	Yes
17	*Alternate Decontamination Facility*	EP	Once every calendar quarter	
18	*Personnel Decontamination Treatment Area*	Radcon	Once every calendar quarter	

Attachment 2
Locked/Sealed Cabinet Listing

Cabinet	Location
Equipment and Supplies Cabinet	Technical Support Center
Equipment and Supplies Cabinet	Operations Support Center
Equipment and Supplies Cabinet	OSC Staging Area
Equipment and Supplies Cabinet	Local Recovery Center
Equipment and Supplies Cabinet (Radcon)	Service Building 565'
Equipment and Supplies Cabinet (Radcon)	Control Building 617'
Equipment and Supplies Cabinet (Hospital)	Decatur General "Emergency Room"
Equipment and Supplies Cabinet (Hospital)	Huntsville Hospital "Emergency Room"
Equipment and Supplies Cabinet (Alternate Decontamination Facility)	Power Service Shop # 4 TVA Muscle Shoals Reservation

Attachment 3

Radcon Emergency Equipment - Service Building 565'

Location: Service Building 565' Behind Radiological Control Lab

Equipment	QTY	INV	OPER	INIT
Radiological Survey Instrumentation				
High Range Survey Meters	2	_____		_____
Ion Chambers	4	_____		_____
GM Survey Meters (*Friskers*)	2	_____		_____
Neutron Survey Meter	1	_____		_____
Silver Zeolite Cartridges	10	_____		_____
Alpha Survey Meter	1	_____		_____
Mini-Scaler	1	_____		_____
Hi-Volume Air Sampler	2	_____		_____
Low-Volume Air Sampler	1	_____		_____
Shielded Detector "Pig" (*Located in Radcon Area, Service Building, 565)'*	1	_____		_____
Miscellaneous				
Calculator (Hand Held)	1	_____	Y N	_____
Batteries (D-Cell)	16	_____	Y N	_____
Log Book	1	_____		_____
Flashlights	8	_____	Y N	_____
Box of Pens	1	_____		_____
Particulate Air Filters (Box)	2	_____		_____
Disc Smears (Box)	1	_____		_____
KI Tablets Expiration Date _____ (*Radcon Supply Cage*)(*Tablets*)	2000	_____		_____

Signatures:

Supervisor, Radcon:_____ **Date:**_____

Manager, EP: _____ **Date:**_____

Retention Period is 36 months - - Non-QA Record

Attachment 4

Radcon Emergency Equipment - Control Building 617'

Location: Control Building 617' Mechanical Equipment Room

Equipment	QTY	INV	OPER	INIT
Radiological Survey Instrumentation				
High Range Survey Meters	2			
Ion Chambers	4			
GM Survey Meters (*Friskers*)	2			
Neutron Survey Meter	1			
Silver Zeolite Cartridges	10			
Alpha Survey Meter	1			
Mini-Scaler	1			
Hi-Volume Air Sampler	2			
Low-Volume Air Sampler	1			
Shielded Detector "Pig"	1			
Miscellaneous				
Calculator (Hand Held)	1		Y N	
Batteries (D-Cell)	16		Y N	
Log Book	1			
Flashlights	8		Y N	
Box of Pens	1			
Particulate Air Filters (Box)	2			
Disc Smears (Box)	1			

Signatures:

Supervisor, Radcon: _____ **Date:** _____

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 5
Staging Area C-Zone Dress-Out Clothing - Service Building 565'
Location: Service Building Column 6, G-line Hallway behind Mechanical Maintenance Offices

Equipment	QTY	INV	INIT
Coveralls (Pairs)	40	_____	_____
Based upon size availability an alternate distribution may be acceptable at the discretion of the Radcon Supervisor and the EP Manager, noted by signature of completed form			
Size 46	10	_____	
Size 48	10	_____	
Size 50	5	_____	
Size 52	5	_____	
Size 54	5	_____	
Size 58	5	_____	
Hood covers	25	_____	_____
Shoe Covers (Pairs)	25	_____	_____
Surgeon Caps	25	_____	_____
Rubber Gloves (Pairs)	25	_____	_____
Booties (Pairs)	25	_____	_____
Cotton Glove Inserts (Pairs)	25	_____	_____
Masking Tape (*Rolls*)	8	_____	_____

Signatures:
Supervisor, Radcon:_____ **Date:**_____
Manager, EP: _____ **Date:**_____
Retention Period is 36 months - - Non-QA Record

Attachment 6
Emergency Use SCBA Inventory

Description	Location	QTY	INV	INIT
Self Contained Breathing Apparatus	Unit 1 Control Room	5	____	____
Self Contained Breathing Apparatus	Unit 2 Control Room	5	____	____
Self Contained Breathing Apparatus	Unit 3 Control Room	5	____	____
45 cu ft. Air Cylinder	Service Building Elevation 565, Service Shop Hallway	15	____	____
Self Contained Breathing Apparatus and 10 additional cylinders	Fire Equipment Cabinet Turbine Building - 557'	10	____	____
Self Contained Breathing Apparatus	4kV Shutdown Bd Rm "C"	*5	____	____
Self Contained Breathing Apparatus	3A Electrical Board Room	5	____	____
Self Contained Breathing Apparatus	Fire Equipment Cabinet Stairwell - RB 1&2 El 565'	4	____	____
Self Contained Breathing Apparatus	Fire Equipment Cabinet Stairwell - RB 2&3 El. 565'	4	____	____
Self Contained Breathing Apparatus	Radcon Emergency Cart	2	____	____
Self Contained Breathing Apparatus	Fire Truck	4	____	____

(*) Required for by 10 CFR 50 Appendix R Support

Signatures:
Supervisor, FIREPROTECTION:_____ **Date:**_____

Manager, EP: _____ **Date:**_____
Retention Period is 36 months - - Non-QA Record

Attachment 7 (Page 1 of 4)
Maintenance Emergency Tool Box Inventory

Electrical Tool Box

Number of Boxes 2 -- Number of Boxes Inventoried ___

Tool Description	QTY	INV	INIT
Pliers, Needle Nose, 6"	2	_____	_____
Pliers Diagonal, 6"	2	_____	_____
Tester, Circuit, 24.0"	2	_____	_____
Rule, Folding, Carpenters, Outside Reading, 6'	2	_____	_____
Pliers, Tongue & Groove, 10"; #430 Channel Locks	2	_____	_____
Screwdriver, STD Tip, .25" Tip, X 8.0" Long	2	_____	_____
Screwdriver, STD Tip, .313" Tip, X 4 0" Long	2	_____	_____
Screwdriver, STD Tip, .125" Tip, X 6 0" Long	2	_____	_____
Pliers, Lineman's, 9.0"	2	_____	_____
Screwdriver, STD Tip, 25" Tip, X 6.0" Long	2	_____	_____
Screwdriver, Phillips Tip, #2 Tip, 4" Blade	2	_____	_____
Screwdriver, Holding, 25" X 6" (Klein)	2	_____	_____
Wrench, Adjustable, 10.0"	2	_____	_____

Attachment 7 (Page 2 of 4)
Maintenance Emergency Tool Box Inventory

I&C Tool Box

Number of Boxes 2 -- Number of Boxes Inventoried ___

Tool Description	QTY	INV	INIT
Pliers, Tongue & Groove, 9, #42 Channel Locks	1		
Screwdriver, STD Tip, .25" Tip, X 6.0" Long	1		
Screwdriver, Jewelers, Set of Six, .25"-.100" Mfg Starrett	1		
Screwdriver, Holding, .25" X 6" (Klein)	1		
Cord, Extension, 110 V 100'	1		
Wrench Set, Hex Key (Allen), Folding, 0.050"-0.187"	1		
Wrench, Ignition, Set	1		
Wrench, Valve Wheel, Number 0, 8.0"X.50"X.656"	1		
Socket, Set, 1/4" DR., SL/DW, 3/16" to 9/16"	1		
Driver, Nut, Set, Fractional 1/4" to 1/2"	1		
Wrench, Set, Hexkey, 028" to 5/8"	1		
Cutter, Tube, .125" to .625"	1		
Cutter, Tube, .125" to 1.125"	1		
Pliers, Diagonals, 6"	1		
Pliers, Lineman, 7"	1		
Pliers, Needle Nose, 7"	1		
Pliers, Tounge & Groove, #430 CL.	1		
File, Half Round, 4" Smooth	1		
File, Round, 6" Smooth	1		
Puller, Fuse, Midget	1		
Puller, Fuse, 100A-250V	1		
Screwdriver, Philips, #1x3"	1		
Screwdriver, Phillips, #2x4"	1		
Screwdriver, Flat, 1/8x2.25"	1		
Screwdriver, Flat, 1/4x6"	1		
Screwdriver, Flat, 1/4x4"	1		
Screwdriver, Flat, 5/16x6"	1		
Screwdriver, holding, SM/pocket Clip	1		
Screwdriver, Holding, 3/16x6"	1		
Screwdriver, holding, 1/4x8"	1		
Wrench, Adjustable, 4"	1		
Wrench, Adjustable, 6"	1		
Wrench, Adjustable, 8"	1		

Attachment 7 (Page 3 of 4)
Maintenance Emergency Tool Box Inventory

I&C Tool Box (CONTINUED)

Tool Description	QTY	INV	INIT
Wrench, Combo, 3/8"	1		
Wrench, Combo, 7/16"	1		
Wrench, Combo 1/2"	1		
Wrench, Combo, 9/16"	1		
Wrench, Combo,5/8"	1		
Wrench, Combo, 11/16"	1		
Wrench, Combo, 3/4"	1		
Wrench, Flare Nut, 1/2"-9/16"	1		
Wrench, Flare Nut, 5/8"-11/16"	1		
Wrench, Flare Nut, 3/4"-1"	1		
Wrench, Flare Nut, 7/8"-1 1/8"	1		
Snoop, Bottle, 8 oz	1		
Note. The following items are supplied by the I&C Shop			
Tube Fitting, 1/4"M NPT to 3/8" tube comp	2		
Tube Fitting, 1/4"F NPT to 1/4" tube comp	2		
Tube Fitting, 3/8" comp to 3/8" comp	2		
Tube Fitting, 1/4" comp to 1/4" comp	2		
Tube Fitting, Tee, 1/4" comp	2		
Tape, Electrical, Scotch 33 Black	1		
Leads, Test, 4'	1		
Jumpers, Banana, 2' orange w/clips	2		
Tywraps, 3/16"x8"	1PK		
Tywraps, 1/8"x4"	1PK		
Valve Wrench, Custom Made, I&C Specs.	1		

Attachment 7 (Page 4 of 4)
Maintenance Emergency Tool Box Inventory

Mechanical Tool Box

Number of Boxes 2 -- Number of Boxes Inventoried ___

Tool Description	QTY	INV	INIT
Flux, Soldering	1		
Chisel, Cold, .4375" Cut	1		
Wrench Set, Combo, 0.250"-1.250"	1		
Wrench Set, Hex Key (Allen), 0 187"-0 375"	1		
Wrench Set, Hex Key (Allen), Folding, 0.050"-0.187"	1		
Socket Set, .375"	1		
Hammer, Ball Pein, 12 oz	1		
Punch, Pin, .188"	1		
Punch, Pin, .125"	1		
Pliers, Tongue & Groove, 9" #420 Channel Locks	1		
Screwdriver, Phillips Tip, Round Shank, #2 Tip X 4 0" Blade	1		
Screwdriver, Phillips Tip, Round Shank, #2 Tip X 1.50" Blade	1		
Screwdriver, STD Tip, .25" Tip X 6.0" Long	1		
Screwdriver, STD Tip, .25" Tip X 12 0" Long	1		
Wrench, Pipe, 12"	1		
Wrench, Adjustable, 12.0"	1		
Pliers, Slip Joint, 10"	1		
Pliers, Needle Nose, W/Side Cutter, 8"	1		

Signatures: _____

Supervisor, Tool Room: _____ **Date:** _____

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 8 (Page 1 of 4)
Technical Support Center Inventory/Operability Check

Equipment In the Technical Support Center	QTY	INV	OPER	INIT
Telecopier	2	____	Y N	____
Telecopier (TAT Area)	1	____	Y N	____
TSC Intercom System	1	____	Y N	____
TSC Zetron Radio System	1	____	Y N	____
Copier	1	____	Y N	____
EP Clock	1	____	Y N	____
Control Room Conference Bridge Headset	2	____	Y N	____
Met Data Terminal & Printer	1	____	Y N	____
ERO Logbooks	*	____		____
Accountability Roster	1	____		____
ICS Terminal (TSC Area)	4	____	Y N	____
ICS Terminal (TAT Area)	1	____	Y N	____
In TSC Equipment & Supply Cabinet				
Calculators, *(Scientific)*	6	____	Y N	____
Flashlights	12	____	Y N	____
Batteries (*D-Cells*)	24	____	Y N	____
Batteries (*AA*)	24	____	Y N	____
Telephone Headsets (*Spares)*	3	____	Y N	____
Staplers	1	____		____
Pens (*Black Ink*)	24	____		____
Pencils	12	____		____
Tape Dispensers w/tape	1	____		____
"Post-it-notes" Pads	12	____		____
Message Pads	12	____		____
Note Pads (*8.5"x 11"*)	12	____		____
Board Cleaner (*Bottles*)	1	____		____
Paper Towels (*Rolls*)	1	____		____
Grease Pencils	12	____		____
Dry Erase Markers	12	____		____
Copier Paper (*Packs*)	4	____		____
Spare Phones for NRC ETS	6	____		____

* Utilize EPIP-6, position attachments to identify what ERO logbooks are intended for use in the TSC.

Attachment 8 (Page 2 of 4)
Technical Support Center Inventory/Operability Check

Procedures/Drawings In the Technical Support Center	QTY	INV	OPER	INIT
*REP	4			
*BFN EPIP's	11			
*CECC EPIP's	2			
*Severe Accident Management Guidelines Flowcharts	1 Set			
*Technical Support Guidelines	1 Set			
*Emergency Operating Instruction (EOI) Flowcharts	1 Set			
*EOI Program Manual	1 Set			
*Radiological Control Instructions	1 Set			
*Abnormal Operating Instructions	1 Set			
*REND	2			
*Al Radiological Emergency Response Plan	1			
*Multi-Jurisdictional Radiological Emergency Response Plan TEMA	1			
*Alarm Response Procedures	1 Set			
*Operating Instructions	1 Set			
*Technical Specifications	1 Set			
*Technical Requirements	1 Set			
*Safe Shutdown Instructions	1 Set			
*Fire Protection Report	1 Set			
*Final Safety Analysis Report	1 Set			
*User Manual Meteorological Data Display Program CECC	1			
*User Manual Nuclear Power (NP) Sites - Emergency Paging System (EPC) CECC	1			
*User Manual Meteorological Data Print Program	1			
*Plant Drawings	1 Set			
Radcon Survey Maps	1 Set			
EP 10-Mile Sample Point Map	2			
EP 2-Mile Sample Point Map	1			
EP 50 Mile Sample Point Map	1			
EP 10 Mile Evacuation Sector Map	1			
Operators Manual Zetron Radio Console	1			

* Controlled Documents or Drawings

Attachment 8 (Page 3 of 4)
Technical Support Center Inventory/Operability Check

Procedures/Drawings In the Technical Assessment Team Area	QTY	INV	OPER	INIT
*REP	1			
*BFN EPIP's	2			
*REND	1			
*Operating Instructions	1 Set			
*Technical Specifications	1 Set			
*Technical Requirements	1 Set			
*UMMI	1 Set			
*UEMI	1 Set			
*EMI	1 Set			
*Unit 2 EOI Appendices	1			
*Unit 3 EOI Appendices	1			
*SAMG EOI Appendices	1			
*SPCC Plan	1			
*Plant Drawings	1 Set			

Attachment 8 (Page 4 of 4)
Technical Support Center Inventory/Operability Check
Technical Support Center Telephones

Telephone Number	Operable	Initials	Telephone Number	Operable	Initials
3777	Y N		2305	Y N	
3730	Y N		3734	Y N	
3771	Y N		3733	Y N	
3770	Y N		3736	Y N	
3732	Y N		3735	Y N	
3764	Y N		3744	Y N	
3761	Y N		3756	Y N	
3765	Y N		3745	Y N	
3767	Y N		3738	Y N	
3766	Y N		3740	Y N	
3768	Y N		3762 w/Headset	Y N	
3763	Y N		3769 w/Headset	Y N	
3779	Y N		3737 w/Headset	Y N	
3782 (Node 2)	Y N		CECC Ringdown	Y N	
3784 (Node 2)	Y N		101/102 Bridge	Y N	
TSC Fixed Satellite	Y N		103 Radcon Bridge	Y N	

Technical Assessment Team Area

Telephone Number	Operable	Initials	Telephone Number	Operable	Initials
3741	Y N		3025	Y N	
2165	Y N		2202	Y N	
2274	Y N		Plt Assessment Ringdown	Y N	

Control Rooms

Telephone Number	Operable	Initials	Telephone Number	Operable	Initials
ODS Unit 1/2 Ringdown	Y N		ODS Unit 3 Ringdown	Y N	
Unit 1/2 Bridge Headset	Y N		Unit 3 Bridge Headset	Y N	
Unit 1/2 Fixed Satellite Telephone	Y N		Unit 3 Fixed Satellite Telephone	Y N	

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 9 (Page 1of 2)
Operations Support Center Inventory/Operability Check

Equipment	QTY	INV	OPER	INIT
In the Operational Support Center				
Telecopier	1	____	Y N	____
OSC Intercom System	1	____	Y N	____
Copier	1	____	Y N	____
EP Clock	1	____	Y N	____
Computer Terminal	1	____	Y N	____
Printer for Computer	1	____	Y N	____
Accountability Roster	1	____		____
OSC Zetron Radio System	1	____	Y N	____
RADCON Zetron Radio System	1	____	Y N	____
ICS Terminals	2	____	Y N	____
In OSC Equipment & Supply Cabinet				
Calculators, (*Scientific*)	6	____	Y N	____
Flashlights	12	____	Y N	____
Batteries (*D-Cells*)	24	____	Y N	____
Batteries (*AA*)	24	____	Y N	____
Telephone Headsets (*Spares*)	2	____	Y N	____
Staplers	3	____		____
Pens (*Black Ink*)	24	____		____
Pencils	12	____		____
Tape Dispensers w/tape	1	____		____
"Post-it-notes" Pads	12	____		____
Message Pads	12	____		____
Note Pads (*8.5"x 11"*)	12	____		____
Board Cleaner (*Bottles*)	1	____		____
Paper Towels (*Rolls*)	1	____		____
Grease Pencils	12	____		____
Dry Erase Markers	12	____		____
Copier Paper (*Packs*)	4	____		____
Hand Held 2-Way Radios	10	____		____
ERO Logbooks	*	____		____

* Utilize EPIP-7, position attachments to identify what ERO logbooks are intended for use in the OSC

Attachment 9 (Page 2of 2)
Operations Support Center Inventory/Operability Check

Operations Support Center Telephones

Telephone Number	Operable	Initials	Telephone Number	Operable	Initials
3276	Y N	____	3639	Y N	____
3233	Y N	____	3274	Y N	____
2964	Y N	____	2942	Y N	____
2599	Y N	____	3225	Y N	____
2558	Y N	____	2598	Y N	____
2026	Y N	____	3660	Y N	____
3184	Y N	____	2904	Y N	____
3780	Y N	____	3093	Y N	____
3172	Y N	____	3001 w/Headset	Y N	____
3750 (Node 1)	Y N	____	2089 w/Headset	Y N	____
3752 (Node 1)	Y N	____			

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 10
OSC Staging Area Inventory/Operability Check

Equipment	QTY	INV	OPER	INIT
In the OSC Staging Area Equipment & Supply Cabinet				
Calculators, (*Scientific*)	1	____	Y N	____
Flashlights	12	____	Y N	____
Batteries (*D-Cells*)	24	____	Y N	____
Staplers	1	____		____
Pens (*Black Ink*)	24	____		____
Pencils	12	____		____
Tape Dispensers	1	____		____
"Post-it-notes" Pads	12	____		____
Message Pads	12	____		____
Note Pads (*8.5"x 11"*)	12	____		____
Accountability Roster	1	____		____
ERO Logbooks	*	____		____
In the OSC Staging Area				
Ice Vests	12	____		____
Ice Packs for vests	72	____		____

Operations Support Center Staging Area Telephones

Telephone Number	Operable	Initials	Telephone Number	Operable	Initials
2244	Y N	____	2115	Y N	____
2309	Y N	____	2215	Y N	____
			2303	Y N	____

* Utilize EPIP-7, position attachments to identify what ERO logbooks are intended for use in the OSC Staging Area.

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 11 (Page 1 of 2)

Huntsville/Decatur General Hospital Inventory/Operability Check

(Circle One)

Hospital Equipment & Supply Cabinet	QTY	INV	OPER	INIT
Personnel Dress-Out Clothing				
"Booties" (*Pairs*)	10			
Dress Out Packages	10			
Surgical Gloves (*Pairs*)	50			
Surgical Gowns	3			
Surgical tape for dressout (*Rolls*)	4			
Rad Monitoring Instruments & Dosimetry				
Bicron Surveyor 50 (GM) or equivalent	2		Y N	
Bicron RSO 5 (Ion Chamber) or equivalent	1		Y N	
TLD's	10			
Electronic Dosimeters	10			
Wound Probe w/Cable	1			
Zone, Survey & Contamination Control Supplies				
Floor Covering (*Set*)	1			
Duct Tape (*Rolls*)	2			
Rad Posting Signs	8			
Contamination Smears	100			
Step-Off-Pads	2			
Rad Ribbon or rope (*Rolls*)	1			
Massilin Mop	1			
Massilin Cloths	20			
Rad Emblem Tape (*Rolls*)	1			
Flexible Funnel w/ drain hose	1			
Fluid Collection Bottle (*2 Gallon min.*)	1			
3 ft. Wide Paper (Feet)	20			
Cotton Swabs	12			
Radioactive Material Tags	12			
Traffic Cones (set)	1			

Attachment 11 (Page 2 of 2)
Huntsville/Decatur General Hospital Inventory/Operability Check

Zone, Survey & Contamination Control Supplies (Continued)	QTY	INV	OPER	INIT
Scissors	1	____		____
Plastic Bags (*Large*)	10	____		____
Plastic Bags (*Medium*)	10	____		____
"Zip Lock" Plastic Bags	24	____		____
Skin Decon Media (*Container*)	1	____		____
Sample Bag Labels	12	____		____
Hospital Response Booklet (*Hospital Specific*)	1	____		____
Wall Poster (*"Care of Contamination Patients"*)	1	____		____
NCRP Report # 65 (*Issued Date - April 15, 1980*)	1	____		____
Decontamination Table, bottle and Backboard	1	____		____

Manager, EP: _____ **Date:** _____
Retention Period is 36 months - - Non-QA Record

Attachment 12
ETS Communications Operability Check

Description	Location	Telephone Number	OPER	INIT
Reactor Safety Counterpart Link (*RSCL*)	TSC (*NRC Area*)	(256) 729-3757	Y N	____
Protective Measures Counterpart Link (*PMCL*)	TSC (*NRC Area*)	(256) 729-3758	Y N	____
Management Counterpart Link (*MCL*)	TSC (*NRC Area*)	(256) 729-3759	Y N	____
Local Area Network (*LAN*) Access (*Check this line by use of a telephone instrument*)	TSC (*NRC Area*)	(256) 729-3760	Y N	____
Health Physics Network (*HPN*)	TSC (*NRC Area*)	(256) 729-2212	Y N	____
Health Physics Network (*HPN*)	TSC (*TVA Area*)	(256) 729-2212	Y N	____
*Emergency Notification System (*ENS*)	TSC (*NRC Area*)	(256) 729-2273	Y N	____
*Emergency Notification System (*ENS*)	TSC (*TVA Area*)	(256) 729-2273	Y N	____
*Emergency Notification System (*ENS*)	Unit 1/2 Control Room	(256) 729-2273	Y N	____
*Emergency Notification System (*ENS*)	Unit 3 Control Room	(256) 729-2273	Y N	____

* Notify the Shift Manager prior to beginning the ENS telephone checks.

Note: IMMEDIATELY, Report Failures to (1) the Shift Manager , and (2) the NRCOC at 9-1-301-951-0550 from a TVA telephone. (The NRC may request that Browns Ferry conduct repairs.)

Note: Upon Completion of repairs, perform a test of the affected telephones. If test is satisfactory, inform the Shift Manager and the NRCOC.

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 13 (Page 1 of 2)
Local Recovery Center Inventory/Operability Check

Equipment	QTY	INV	OPER	INIT
In the LRC Area				
Met Data Terminal	1	_____	Y N	_____
Printer for Met Data Terminal	1	_____	Y N	_____
ICS Terminal	1	_____	Y N	_____
In LRC Equipment & Supply Cabinet				
Calculators, (*Scientific*)	4	_____	Y N	_____
Flashlights	12	_____	Y N	_____
Batteries (*D-Cells*)	24	_____	Y N	_____
Staplers	1	_____		_____
Pens (*Black Ink*)	24	_____		_____
Pencils	12	_____		_____
Tape Dispensers	1	_____		_____
"Post-it-notes" Pads	12	_____		_____
Message Pads	12	_____		_____
Note Pads (*8.5"x 11"*)	12	_____		_____
Board Cleaner (*Bottles*)	2	_____		_____
Paper Towels (*Rolls*)	1	_____		_____
Dry Erase Markers	12	_____		_____

Attachment 13 (Page 2 of 2)
Local Recovery Center Inventory/Operability Check

Telephone Number	Operable	Initials	Telephone Number	Operable	Initials
2038	Y N		2692	Y N	
3666	Y N		2460	Y N	
3636	Y N		2064	Y N	
3656	Y N		3647	Y N	
3645	Y N				
Portable Satellite Telephone	Y N				

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 14
EP Quarterly Administrative Checks and Reviews

	QTY	INV	DATE	INIT
Emergency Response List Update				
• **Nuclear Security Shift Supervisor's Office (5-Copies)**	5	____	____	____
Call-Out List				
• **Shift Manager**	1	____	____	____

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 15
EP Once per Calendar Quarter Administrative Checks and Reviews

	QTY	INV	DATE	INIT
Emergency Procedure Telephone Number Review and Update • **BFNP Emergency Preparedness Implementing Procedures**	**ALL**			

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 16
EP Annual Administrative Checks and Reviews

	QTY	INV	DATE	INIT
Review Emergency Procedures				
• **Radiological Emergency Plan**	**NA**	____	____	____
• **Browns Ferry, Emergency Plan Implementing Procedures**	**NA**	____	____	____

Manager, EP: _____ **Date:** _____

Retention Period is 36 months - - Non-QA Record

Attachment 17
Alternate Decontamination Facility
Power Service Shop # 4 - TVA, Muscle Shoals Reservation

Equipment	QTY	INV	INIT
Supply Cabinet			
Cotton Tipped Swabs	2 PKG		
Square Gauze	1 Box		
Detergent	1 Box		
Surgical Brush	12		
Waterless Hand Cleaner	2 Cans		
Shampoo	2 BTL		
Paper Bath Towels	100		
Small Coveralls	12		
Medium Coveralls	12		
Large Coveralls	12		
Small Tennis Shoes	12		
Large Tennis Shoes	12		

Signatures:
Inventoried/Inspected by _____ **Date:** _____
Manager, EP: _____ **Date:** _____
Retention Period is 36 months - - Non-QA Record

Attachment 18
Personnel Decontamination Treatment Area

Equipment/Supplies	QTY	INV	INIT
Disposable Gloves	2 Box	_____	_____
Gauze Pads	2 Box	_____	_____
Cotton Swabs	1 PKG	_____	_____
Saline Solution	2 Bottle	_____	_____
Surgical Brushes	12 Each	_____	_____
Shampoo	2 BTL	_____	_____
Soap	5 Bars	_____	_____
Laundry Detergent	1 Box	_____	_____
Soap (liquid abrasive)	1 Bottle	_____	_____
Mechanic's Hand Cleaner	2Cans	_____	_____
Shaving Cream	1 Can	_____	_____
Razors	5 Each	_____	_____
Paper Bath Towels	1 Box	_____	_____
Towels	25 Each	_____	_____
Scissors	1 Pair	_____	_____
Petri Dish	5 Each	_____	_____
Duct Tape	2 Rolls	_____	_____
Paper Coveralls	10 Pair	_____	_____
Tennis Shoes (Sizes 7-12) (half-sizes are OK)	one pair each	_____	_____

Signatures:
Supervisor, Radcon: _____ **Date:**_____
Manager, EP: _____ **Date:**_____
Retention Period is 36 months - - Non-QA Record

LAST PAGE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-13

DOSE ASSESSMENT

REVISION 9

PREPARED BY: T. W. CORNELIUS PHONE 2038

RESPONSIBLE ORGANIZATION. EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT LITTLE DATE:10/18/2002

EFFECTIVE DATE: 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number: EPIP-13 Revision Number: 9

Pages Affected: ALL

Pagination Pages: ALL

Description of Change:

IC-10 The Dose Assessment portion of EPIP-14 was removed and placed in EPIP-13 as a part of EP Standardization. EPIP-13, "Chemistry Procedure" was replaced with the Dose Assessment process. Applicable portions of EPIP-13 were placed into EPIP-7. Neither SQN or WBN have a "Chemistry Procedure". The EP Peer Team recommended revising EPIP-13 to become the "Dose Assessment" procedure.

1.0 PURPOSE

The purpose of this procedure is to describe actions and responsibilities of Radiological Controls (RADCON) personnel during an assessment of environmental radiological conditions at Browns Ferry.

2.0 SCOPE

EPIP-13 will be initiated when the RADCON Shift Supervisor or designee is requested or requires information regarding dose assessment.

EPIP-13 contains instructions for RADCON regarding methods for Projecting Total Effective Dose Equivalent (TEDE) and Thyroid Committed Dose Equivalent (CDE) from airborne radioactivity releases.

The method for projecting TEDE and/or CDE from airborne radioactivity releases may be requested by operations to support emergency classification and/or protective action recommendations. The use of this method should only be utilized in the absence of more sophisticated dose models, when the Central Emergency Control Center (CECC) is not activated.

3.0 INSTRUCTIONS

3.1 Method for Projecting Total Effective Dose Equivalent (TEDE) and Thyroid Committed Dose Equivalent (CDE) from Airborne Radioactivity Releases

The method for Projecting TEDE and Thyroid CDE from Airborne Radioactivity Releases is by manual method through the application of matrix tables and calculations.

3.1.1 Manual Method for Projecting TEDE and Thyroid CDE from Airborne Radioactivity Releases

3.1.1.1 The Radcon Shift Supervisor/designee or the TSC Radcon representative is responsible for completing Attachment A of this procedure when releases involves a stack release or Attachment B when the release involves a building or ground level release. The results of the completed attachment "A" and "B" should then be summarized on attachment "C" and forwarded to the Shift Manager / Site Emergency Director.

3.0 INSTRUCTIONS (CONTINUED)

3.1.1.2 This method for projecting the TEDE and Thyroid CDE from airborne radioactivity releases should only be utilized in the absence of more sophisticated dose models.

3.1.1.3 This method may be requested by the Shift Manager prior to any emergency classification declaration. Results of this method may be utilized to classify emergency conditions, make protective action recommendations or by TSC personnel conducting evaluations of current plant conditions.

3.1.1.4 When requested the appropriate attachment of this procedure should be completed immediately and the results reported to the Shift Manager or SED.

4.0 ATTACHMENTS

Attachment A - Projecting Total Effective Dose Equivalent (TEDE) and Thyroid Committed Dose Equivalent (CDE) from Stack Airborne Radioactivity Releases

Attachment B - Projecting Total Effective Dose Equivalent (TEDE) and Thyroid Committed Dose Equivalent (CDE) from Ground Level Airborne Radioactivity Releases

Attachment C - Projected TEDE and Thyroid CDE Assessment Survey Form

ATTACHMENT A (Page 1 of 8)

PROJECTING TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE) FROM STACK AIRBORNE RADIOACTIVITY RELEASES

CAUTION: USE THIS ATTACHMENT FOR STACK RELEASES ONLY

DETERMINE RELEASE PATHWAY

Contact the affected unit, Unit Supervisor to obtain information regarding the release pathway. The two pathway options for a stack release are; (1) stack (filtered) and (2) stack (unfiltered). Remember that when multiple pathways such as, Stack and Ground-Level, are experienced, both pathway calculations should be conducted and the results summed and recorded on Attachment C, the projected TEDE Thyroid CDE assessment survey form.

Record data on page 5 of this attachment.

DETERMINE ESTIMATED RELEASE START TIME AND RELEASE DURATION

Contact the affected unit, Unit Supervisor to obtain information regarding the release start time and duration Record release duration in hours. If the release duration can not be determined by operations, then a default duration of 4 hours should be utilized.

Record data on page 5 of this attachment.

DETERMINE NOBLE GAS RELEASE RATE IN µCi/SECOND

The Noble Gas Release Rate should be calculated utilizing data obtained from the SPDS terminals under the screen name "MISCRAD". From this screen use the "F5" key to view a tabular form of the instruments utilized by the previous screen. Collect data described as "WIDE RANGE GASEOUS EFFL RAD MON and STACK FLOW".

If the value for the "WIDE RANGE GASEOUS EFFL RAD MON" is equal to or less than 0.00, then discontinue the dose assessment and report that there are no off-site TEDE concerns for the stack release.

Utilize SPDS history to obtain the highest release concentration for the incident. It is recommended that data be reviewed from history approximately thirty (30) minutes prior to the estimated start time as referenced in the preceding step. Place the data in the applicable calculation fields. The completed calculation provides the Noble Gas Release Rate. Record and utilize this rate for the dose assessment calculations.

If SPDS is unavailable, notify affected unit, operations personnel, to gain the information utilizing control room instrumentation, or if unavailable notify the Shift Manager/Site Emergency Director that TI-67, "Determination of Stack and Hardened Wetwell Vent Release Rates" (backup method), procedure must be performed by Radcon and Chemistry personnel.

The following conversion chart can be utilized to convert curies to microcuries

TO CONVERT	MULTIPLY BY	TO OBTAIN
Ci	1.0×10^6	µCi

Record data on page 5 of this attachment.

ATTACHMENT A (Page 2 of 8)

DETERMINE RELEASE TYPE

Contact the Plant Assessment Team, Core Damage Assessor (5-751-1633) in the CECC to determine the applicable release type. If the Core Damage Group in the CECC can not be contacted, then use the default release type, "Type 2". The four release type options are; (1) "Type 1", Reactor Coolant System Leakage Release, (2) "Type 2" Fuel Cladding GAP Release, (3) "Type 3", Fuel Over Temperature Release, and (4) "Type 4", Fuel Melt.

Some release types have an additional "F" indicator, this implies that the release type has a filtered release pathway.

Record data on page 5 of this attachment.

DETERMINE METEOROLOGICAL DATA

Met data should be obtained from the SPDS terminals under screen name "METDATA" or by accessing the "Met Data Terminal" located in the Technical Support Center.

For stack releases record measurements at the 91 meter instrument readings.

If all Met Data Collection Methods are unavailable contact the National Weather Service by dialing 9-1-205-621-5650. The National Weather Service will provide wind speed and wind direction.

The default value for stability class with no met data available is "D" for stack releases.
The default value for wind speed with no met data available is 4.0 meters/second for the stack.

Record the following data on page 5 of this attachment

- **STABILITY CLASS**
  Note: Stability Class may be electronically displayed as 1,2,3.... This corresponds to A,B,C....

- **WIND SPEED IN METERS/SECOND**
  The following conversion chart can be utilized for conversions to meters/second.

TO CONVERT	MULTIPLY BY	TO OBTAIN
MILES/H	0.45	METERS/SEC
METERS/SEC	2.2	MILES/H
KNOTS	0.5	METERS/SEC

- **WIND DIRECTION IN DEGREES**
- **PLUME DIRECTION IN DEGREES**
  NOTE: TO OBTAIN PLUME DIRECTION, ADD 180^0 TO WIND DIRECTION IF < 180^0 OR SUBTRACT 180^0 IF WIND DIRECTION IS > 180^0.

ATTACHMENT A (Page 3 of 8)

DETERMINE THE TEDE FACTOR

In determining the TEDE Factor you must know the stability class and the wind speed.

Locate the "TEDE Factor" table that corresponds to the applicable stability class located on page 7 of this attachment.

Locate the column within the table that corresponds to the applicable wind speed. If wind speed falls between the two column variables choose the lower value, this is the more conservative factor.

Determine data for the 0.62, 2 and 5 mile distances.

Record data on page 5 of this attachment.

DETERMINE THE TEDE RATIO

In determining the TEDE Ratio you must know the release pathway and the release type.

Locate the "TEDE Ratio" table that corresponds to the applicable release pathway located on page 8 of this attachment.

Locate the column within the table that corresponds to the applicable release type. Recall that the "F" indicator for some release types simply indicate that the release type is filtered.

Determine data for the 0.62, 2 and 5 mile distances.

Record data on page 5 of this attachment

DETERMINE THE THYROID CDE RATIO

In determining the Thyroid CDE Ratio you must know the release pathway and the release type.

Locate the " Thyroid CDE Ratio" table that corresponds to the applicable release pathway located on page 8 of this attachment.

Locate the column within the table that corresponds to the applicable release type. Recall that the "F" indicator for some release types simply indicate that the release type is filtered

Determine data for the 0.62, 2 and 5 mile distances

Record data on page 5 of this attachment.

ATTACHMENT A (Page 4 of 8)

Complete CALCULATIONS AND ATTACHMENT C

Input data into applicable calculation fields and calculate. Use caution to input correct factors and ratios for the different mile indications.

Note, to complete the Thyroid CDE calculation, the TEDE calculation must be completed and the TEDE value utilized.

Also use caution when inserting values into the calculations. Use correct terms, i.e. meters/second verses miles/hour.

COMPLETE ATTACHMENT C, PROJECTED TEDE AND THYROID CDE ASSESSMENT SURVEY FORM, AND FORWARD TO THE SHIFT MANAGER OR THE SITE EMERGENCY DIRECTOR. ENTER TEDE VALUES IN REM/HR ON ARROWS FOR APPLICABLE MILEAGE RINGS SHOW PLUME DIRECTION ON SURVEY MAP BY THE USE OF AN ARROW.

ATTACHMENT A (Page 5 of 8)

Stack Release
Data Collection and Calculation Worksheet

RELEASE PATHWAY ☐ STACK (FILTERED) ☐ STACK (UNFILTERED)

ESTIMATED RELEASE START TIME _____ ESTIMATED RELEASE DURATION _____
NOTE: IF AN ESTIMATED RELEASE DURATION IS UNKNOWN USE 4 HOURS AS THE DEFAULT RELEASE DURATION.

NOBLE GAS RELEASE RATE _____ µCI/SECOND

NOBLE GAS CONCENTRATION _____ µCI/CC
FLOW RATE _____ SCFM

(_____ µCI/CC) X (_____ SCFM) X (472) = _____ µCI/SECOND
RELEASE CONC FLOW RATE CONVERSION FACTOR RELEASE RATE

RELEASE TYPE
☐ TYPE 1F (FILTERED) ☐ TYPE 1 (UNFILTERED)
☐ TYPE 2F (FILTERED) ☐ TYPE 2 (UNFILTERED)
☐ TYPE 3F (FILTERED) ☐ TYPE 3 (UNFILTERED)
☐ TYPE 4F (FILTERED) ☐ TYPE 4 (UNFILTERED)

NOTE: TYPE 2 IS THE DEFAULT RELEASE TYPE.

STABILITY CLASS _____ WIND SPEED _____ METERS/SECOND

WIND DIRECTION _____ DEGREES PLUME DIRECTION _____ DEGREES

TEDE FACTOR
0.62 MILES _____
2.0 MILES _____
5.0 MILES _____

TEDE RATIO
0.62 MILES _____
2.0 MILES _____
5.0 MILES _____

THYROID CDE RATIO
0.62 MILES _____
2.0 MILES _____
5.0 MILES _____

ATTACHMENT A (Page 6 of 8)

Stack Release
Data Collection and Calculation Worksheet

TEDE DOSE ASSESSMENT CALCULATIONS

0.62 - 1.99 MILES

(_____) X (_____ µCi/s) X (_____ HOURS) X (_____) = _____ TEDE REM
TEDE FACTOR | RELEASE RATE | RELEASE DURATION | TEDE RATIO

2.00 - 4.99 MILES

(_____) X (_____ µCi/s) X (_____ HOURS) X (_____) = _____ TEDE REM
TEDE FACTOR | RELEASE RATE | RELEASE DURATION | TEDE RATIO

5.00 - 10.00 MILES

(_____) X (_____ µCi/s) X (_____ HOURS) X (_____) = _____ TEDE REM
TEDE FACTOR | RELEASE RATE | RELEASE DURATION | TEDE RATIO

THYROID CDE DOSE ASSESSMENT CALCULATIONS

0.62 - 1.99 MILES

(_____) X (_____) = _____ THYROID CDE REM
TEDE REM | THYROID CDE RATIO

2.00 - 4.99 MILES

(_____) X (_____) = _____ THYROID CDE REM
TEDE REM | THYROID CDE RATIO

5.00 - 10.00 MILES

(_____) X (_____) = _____ THYROID CDE REM
TEDE REM | THYROID CDE RATIO

COMPLETE ATTACHMENT C AND FORWARD TO SM/SED.

ATTACHMENT A (Page 7 of 8)

TEDE Factor (rem/h per μCi/s) from a BFN Stack Release

Stability A — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62 mi	1.1E-09	6 0E-10	4 8E-10	3 6E-10	2 4E-10	2 2E-10	1.9E-10	1.7E-10	1.4E-10	1.2E-10
2 mi	4 4E-10	2 2E-10	1.8E-10	1 3E-10	8 7E-11	7 8E-11	7 0E-11	6 1E-11	5 2E-11	4 4E-11
5 mi	7 4E-11	5 2E-11	4 8E-11	4 4E-11	4 0E-11	3 6E-11	3 2E-11	2 8E-11	2 4E-11	2.0E-11

Stability B — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	2 3E-09	1.1E-09	9.3E-10	7.1E-10	4 9E-10	4 4E-10	3.9E-10	3 4E-10	2.9E-10	2 4E-10
2	6 5E-10	3.3E-10	2.7E-10	2 0E-10	1 3E-10	1 2E-10	1.1E-10	9.4E-11	8 0E-11	6 6E-11
5	9 9E-11	6 8E-11	6 6E-11	6 5E-11	6 4E-11	5 8E-11	5 1E-11	4 5E-11	3 9E-11	3 2E-11

Stability C — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	2.0E-09	1 1E-09	9 2E-10	7.0E-10	4.8E-10	4 4E-10	3 9E-10	3 4E-10	2 9E-10	2.5E-10
2	1 4E-09	8 1E-10	6 5E-10	4 9E-10	3.3E-10	3.0E-10	2 7E-10	2 3E-10	2 0E-10	1.7E-10
5	1 6E-10	1.1E-10	1.1E-10	1.1E-10	1.1E-10	1.0E-10	9 0E-11	7.9E-11	6.7E-11	5 5E-11

Stability D — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	1.7E-09	1 1E-09	8 9E-10	6 7E-10	4 6E-10	4 1E-10	3 7E-10	3 2E-10	2 8E-10	2 3E-10
2	1.9E-09	1 2E-09	9 8E-10	7 6E-10	5 3E-10	4 7E-10	4 2E-10	3 7E-10	3 2E-10	2 6E-10
5	4.0E-10	3 0E-10	3 1E-10	3 1E-10	3 2E-10	2 9E-10	2 6E-10	2 2E-10	1 9E-10	1 6E-10

Stability E — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	1 7E-09	1.2E-09	9 7E-10	7.4E-10	5 1E-10	4 6E-10	4 1E-10	3.6E-10	3 1E-10	2 6E-10
2	2 1E-09	1 3E-09	1 1E-09	8 0E-10	5 5E-10	5 0E-10	4 4E-10	3 9E-10	3 4E-10	2 8E-10
5	6 0E-10	4 3E-10	4 4E-10	4 5E-10	4 6E-10	4 2E-10	3 7E-10	3 2E-10	2 8E-10	2 3E-10

Stability F — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	1 5E-09	9 9E-10	8 0E-10	6.1E-10	4 2E-10	3.8E-10	3 4E-10	2 9E-10	2.5E-10	2 1E-10
2	1 8E-09	1.2E-09	9.8E-10	7.6E-10	5 4E-10	4 9E-10	4.4E-10	3 8E-10	3 3E-10	2 8E-10
5	6 7E-10	4 9E-10	5 1E-10	5 2E-10	5 4E-10	4 9E-10	4 4E-10	3.8E-10	3 3E-10	2 8E-10

Stability G — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	1.5E-09	9 0E-10	7 3E-10	5 5E-10	3 8E-10	3 4E-10	3 0E-10	2 7E-10	2 3E-10	1.9E-10
2	1 6E-09	9 8E-10	8 1E-10	6.3E-10	4 6E-10	4.2E-10	3 7E-10	3 3E-10	2.8E-10	2.4E-10
5	5 4E-10	4.0E-10	4.3E-10	4 5E-10	4 8E-10	4 4E-10	3 9E-10	3 5E-10	3.0E-10	2 6E-10

ATTACHMENT A (Page 8 of 8)

TEDE RATIOS FOR VARIOUS PATHS AND RELEASE TYPES
(STACK Release)

Stack (Filtered)

mi	Type 1F	Type 2F	Type 3F	Type 4F
0 62	1 0	1 0	1 1	1.2
2	1.0	1.0	1 0	1.1
5	1.0	1 0	1 0	1 1

STACK (unfiltered)

mi	Type 1	Type 2	Type 3	Type 4
0.62	1 9	1.9	2.4	5.3
2	2 4	2 4	3.3	8.8
5	3 5	3.5	4 8	13 5

THYROID CDE RATIOS FOR VARIOUS ACCIDENTS AND RELEASE TYPES
(STACK Release)

Stack (Filtered)

mi	Type 1F	Type 2F	Type 3F	Type 4F
0.62	1.6 E-03	1.6 E-03	7.6 E-03	1.4E-02
2	4.4 E-02	4.4 E-02	1.7 E-02	3.0E-02
5	6.9 E-02	6.9 E-02	2.7E-02	4.6E-02

STACK (unfiltered)

mi	Type 1	Type 2	Type 3	Type 4
0 62	1.1E+00	1.1E+00	3.6E-01	3.1E-01
2	1.8E+00	1.8E+00	5.2E-01	3.7E-01
5	2 0E+00	2.0E+00	5.8E-01	3.7E-01

ATTACHMENT B (Page 1 of 8)

PROJECTING TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE) AND THYROID CDE FROM GROUND-LEVEL RADIOACTIVITY RELEASES

CAUTION: USE THIS ATTACHMENT FOR GROUND-LEVEL RELEASES ONLY

DETERMINE RELEASE PATHWAY

Contact the affected unit, Unit Supervisor to obtain information regarding the release pathway. The two pathway options for a ground level release are; (1) Containment Bypass (CTM) and (2) Main Steam Line Break (MSLB). Remember that when multiple pathways such as, Stack and Ground-Level, are experienced, both pathway calculations should be conducted and the results summed and recorded on Attachment C, the projected TEDE and Thyroid CDE assessment survey form.

Record data on page 5 of this attachment.

DETERMINE ESTIMATED RELEASE START TIME AND RELEASE DURATION

Contact the affected unit, Unit Supervisor to obtain information regarding the release start time and duration. Record release duration in hours. If the release duration can not be determined, then a default duration of 4 hours should be utilized.

Record data on page 5 of this attachment.

DETERMINE NOBLE GAS RELEASE RATE IN µCI/SECOND

To obtain the Total Noble Gas Release Rate for a building/ground level release the collection of rates from several building exhaust continuous air monitors (CAM) will be required. The Noble Gas Release Rate data should be obtained from a SPDS terminal under the screens "U1CAMS, "U2CAMS", and "U3CAMS". When you reach the applicable window press the "F5" key to retrieve a tabular set of CAM data. Collect all CAM data as petitioned by page 4 of this attachment. Sum all rates together to obtain a Total Building Noble Gas Release Rate Record and utilize this rate for the dose assessment calculations. Utilize SPDS history to assist in obtaining the highest release rate for the incident. It is recommended that data be reviewed from approximately thirty (30) minutes prior to the estimated start time as referenced in the preceding step.

If SPDS is unavailable, notify affected unit operations personnel to gain the information utilizing control room instrumentation, or through the completion of 0-SI-4.B.1.a.1, Attachment 11.

The following conversion chart can be utilized to convert curies to microcuries.

TO CONVERT	MULTIPLY BY	TO OBTAIN
Ci	1.0×10^6	µCi

Record data on page 5 of this attachment.

ATTACHMENT B (Page 2 of 8)

DETERMINE RELEASE TYPE

Contact the Plant Assessment Team, Core Damage Assessor (5-751-1633) in the CECC to determine the applicable release type. If the Core Damage Group in the CECC can not be contacted, then use the default release type, "Type 2". The four release type options are; (1) "Type 1", Reactor Coolant System Leakage Release, (2) "Type 2" Fuel Cladding GAP Release, (3) "Type 3", Fuel Over Temperature Release, and (4) "Type 4", Fuel Melt.

Some release types have an additional "F" indicator, this implies that the release type has a filtered release pathway.

Record data on page 5 of this attachment.

DETERMINE METEOROLOGICAL DATA

Met data should be obtained from the SPDS terminals under screen name "METDATA" or by accessing the "Met Data Terminal" located in the Technical Support Center.

For ground-level releases record measurements at the 46 meter instrument readings.

If all Met Data Collection Methods are unavailable contact the National Weather Service by dialing 9-1-205-621-5650. The National Weather Service will provide wind speed and wind direction.

The default value for stability class with no met data available is "D" for ground level releases.
The default value for wind speed with no met data available is 2.0 meters/second for ground level releases.

Record the following data on page 5 of this attachment.

- **STABILITY CLASS**
  Note: Stability Class may be electronically displayed as 1,2,3.... This corresponds to A,B,C. .
- **WIND SPEED IN METERS/SECOND**
  The following conversion chart can be utilized for conversions to meters/second.

TO CONVERT	MULTIPLY BY	TO OBTAIN
MILES/H	0.45	METERS/SEC
METERS/SEC	2.2	MILES/H
KNOTS	0.5	METERS/SEC

- **WIND DIRECTION IN DEGREES**
- **PLUME DIRECTION IN DEGREES**
  NOTE: TO OBTAIN PLUME DIRECTION, ADD 180^0 TO WIND DIRECTION IF < 180^0 OR SUBTRACT 180^0 IF WIND DIRECTION IS > 180^0.

ATTACHMENT B (Page 3 of 8)

DETERMINE THE TEDE FACTOR

In determining the TEDE Factor you must know the stability class and the wind speed.

Locate the "TEDE Factor" table that corresponds to the applicable stability class located on page 7 of this attachment.

Locate the column within the table that corresponds to the applicable wind speed. If wind speed falls between the two column variables choose the lower value; this is the more conservative factor.

Determine data for the 0.62, 2 and 5 mile distances.

Record data on page 6 of this attachment.

DETERMINE THE TEDE RATIO

In determining the TEDE Ratio you must know the release pathway and the release type.

Locate the "TEDE Ratio" table that corresponds to the applicable release pathway located on page 8 of this attachment.

Locate the column within the table that corresponds to the applicable release type. Recall that the "F" indicator for some release types simply indicate that the release type is filtered.

Determine data for the 0.62, 2 and 5 mile distances.

Record data on page 6 of this attachment.

DETERMINE THE THYROID CDE RATIO

In determining the Thyroid CDE Ratio you must know the release pathway and the release type

Locate the " Thyroid CDE Ratio" table that corresponds to the applicable release pathway located on page 8 of this attachment.

Locate the column within the table that corresponds to the applicable release type. Recall that the "F" indicator for some release types simply indicate that the release type is filtered.

Determine data for the 0.62, 2 and 5 mile distances.

Record data on page 6 of this attachment.

ATTACHMENT B (Page 4 of 8)

Complete CALCULATIONS AND ATTACHMENT C

Input data into applicable calculation fields and calculate. Use caution to input correct factors and ratios for the different mile indications.

Note, to complete the Thyroid CDE calculation, the TEDE calculation must be completed and the TEDE value utilized.

Also use caution when inserting values into the calculations. Use correct terms, i.e. meters/second verses miles/hour.

COMPLETE ATTACHMENT C, PROJECTED TEDE AND THYROID CDE ASSESSMENT SURVEY FORM, AND FORWARD TO THE SHIFT MANAGER OR THE SITE EMERGENCY DIRECTOR. ENTER TEDE VALUES IN REM/HR ON ARROWS FOR APPLICABLE MILEAGE RINGS. SHOW PLUME DIRECTION ON SURVEY MAP BY THE USE OF AN ARROW.

ATTACHMENT B (Page 5 of 8)

Ground-Level Release
Data Collection and Calculation Worksheet

RELEASE PATHWAY ☐ CTM BYPASS ☐ MAIN STEAM LINE BREAK

ESTIMATED RELEASE START TIME _____ ESTIMATED RELEASE DURATION _____

NOTE: IF AN ESTIMATED RELEASE DURATION IS UNKNOWN USE 4 HOURS AS THE DEFAULT RELEASE DURATION

NOBLE GAS RELEASE RATE _____ µCI/SECOND

	POINT ID	DESCRITPTION	CURRENT VALUE
SPDS	90-252c0	U0 CAM-RB VENT EXH BETA GAS	_____ µCI/SEC
"U1CAMS"	90-250c1	U1 CAM-RB VENT EXH BETA GAS	_____ µCI/SEC
"F5"	90-251c1	U1 CAM-TB VENT EXH BETA GAS	_____ µCI/SEC
"HISTORY"	90-249c1	U1 CAM-TB VENT EXH BETA GAS	_____ µCI/SEC

	POINT ID	DESCRITPTION	CURRENT VALUE
SPDS	90-250c2	U2 CAM-RB VENT EXH BETA GAS	_____ µCI/SEC
"U2CAMS"	90-251c2	U2 CAM-TB VENT EXH BETA GAS	_____ µCI/SEC
"F5"	90-249c2	U2 CAM-TB VENT EXH BETA GAS	_____ µCI/SEC
"HISTORY"			

	POINT ID	DESCRITPTION	CURRENT VALUE
SPDS	90-250c3	U3 CAM-RB VENT EXH BETA GAS	_____ µCI/SEC
"U3CAMS"	90-251c3	U3 CAM-TB VENT EXH BETA GAS	_____ µCI/SEC
"F5"	90-249c3	U3 CAM-TB VENT EXH BETA GAS	_____ µCI/SEC
"HISTORY"			

TOTAL NOBLE GAS RELEASE RATE _____ µCI/SEC

RELEASE TYPE
- ☐ TYPE 1 (UNFILTERED)
- ☐ TYPE 2 (UNFILTERED)
- ☐ TYPE 3 (UNFILTERED)
- ☐ TYPE 4 (UNFILTERED)

NOTE: TYPE 2 IS THE DEFAULT RELEASE TYPE.

STABILITY CLASS _____ WIND SPEED _____ METERS/SECOND

WIND DIRECTION _____ DEGREES PLUME DIRECTION _____ DEGREES

ATTACHMENT B (Page 6 of 8)

TEDE FACTOR 0 62 MILES _____
2.0 MILES _____
5.0 MILES _____

TEDE RATIO 0 62 MILES _____
2.0 MILES _____
5.0 MILES _____

THYROID CDE RATIO

0.62 MILES _____
2 0 MILES _____
5 0 MILES _____

TEDE DOSE ASSESSMENT CALCULATIONS

0.62 - 1.99 MILES

(_____) X (_____ µCi/s) X (_____ HOURS) X (_____) = _____ TEDE REM
TEDE FACTOR | RELEASE RATE | RELEASE DURATION | TEDE RATIO

2.00 - 4.99 MILES

(_____) X (_____ µCi/s) X (_____ HOURS) X (_____) = _____ TEDE REM
TEDE FACTOR | RELEASE RATE | RELEASE DURATION | TEDE RATIO

5.00 - 10.00 MILES

(_____) X (_____ µCi/s) X (_____ HOURS) X (_____) = _____ TEDE REM
TEDE FACTOR | RELEASE RATE | RELEASE DURATION | TEDE RATIO

THYROID CDE DOSE ASSESSMENT CALCULATIONS

0.62 - 1.99 MILES

(_____) X (_____) = _____ THYROID CDE REM
TEDE REM | THYROID CDE RATIO

2.00 - 4.99 MILES

(_____) X (_____) = _____ THYROID CDE REM
TEDE REM | THYROID CDE RATIO

5.00 - 10.00 MILES

(_____) X (_____) = _____ THYROID CDE REM
TEDE REM | THYROID CDE RATIO

COMPLETE ATTACHMENT C AND FORWARD TO SM/SED.

ATTACHMENT B (Page 7 of 8)

TEDE FACTOR (rem/hr per μCi/s) FROM A GROUND-LEVEL RELEASE

Stability A — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62 mi	1 6E-09	8 0E-10	6 4E-10	4 8E-10	3 2E-10	2 9E-10	2.5E-10	2.2E-10	1 9E-10	1.6E-10
2 mi	5 5E-10	2 8E-10	2 2E-10	1.7E-10	1 1E-10	1 0E-10	9 0E-11	7 8E-11	6 7E-11	5 5E-11
5 mi	7 5E-11	5 2E-11	5 2E-11	5 1E-11	5 1E-11	4 6E-11	4 0E-11	3 5E-11	3 0E-11	2 5E-11

Stability B — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	7.5E-09	3 7E-09	3 0E-09	2 2E-09	1.4E-09	1 3E-09	1 2E-09	1 0E-09	8 9E-10	7 5E-10
2	7 2E-10	3 6E-10	2 9E-10	2 2E-10	1.4E-10	1 3E-10	1 2E-10	1 0E-10	8 7E-11	7 2E-11
5	9 9E-11	6 8E-11	6.7E-11	6 7E-11	6 6E-11	6 0E-11	5 3E-11	4 6E-11	4 0E-11	3 3E-11

Stability C — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	2 2E-08	1 1E-08	9 0E-09	6 7E-09	4 3E-09	3 9E-09	3 5E-09	3 0E-09	2 6E-09	2 2E-09
2	2 9E-09	1 4E-09	1 2E-09	8 8E-10	5 9E-10	5 3E-10	4 7E-10	4 1E-10	3 5E-10	2 9E-10
5	1.9E-10	1 3E-10	1 3E-10	1 3E-10	1 3E-10	1.2E-10	1.1E-10	9 3E-11	7 9E-11	6 5E-11

Stability D — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	6 3E-08	3.2E-08	2 6E-08	1 9E-08	1 2E-08	1 1E-08	1 0E-08	8 8E-09	7 5E-09	6 3E-09
2	1 0E-08	5 4E-09	4 3E-09	3 2E-09	2 2E-09	1 9E-09	1.7E-09	1 5E-09	1 3E-09	1 0E-09
5	8 3E-10	5 8E-10	5 7E-10	5 6E-10	5 6E-10	5 0E-10	4 5E-10	3.9E-10	3 4E-10	2 8E-10

Stability E — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	1.1E-07	5 5E-08	4 4E-08	3 3E-08	2 2E-08	2 0E-08	1 8E-08	1 6E-08	1 3E-08	1 1E-08
2	2 1E-08	1 0E-08	8 3E-09	6 3E-09	4 2E-09	3 8E-09	3 4E-09	2 9E-09	2 5E-09	2 1E-09
5	1 8E-09	1 2E-09	1 2E-09	1.2E-09	1.2E-09	1.1E-09	9 8E-10	8 6E-10	7.3E-10	6 0E-10

Stability F — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	2 2E-07	1.0E-07	8 3E-08	6 3E-08	4 2E-08	3 8E-08	3 4E-08	3 0E-08	2 6E-08	2.2E-08
2	4 9E-08	2 5E-08	2 0E-08	1.5E-08	9 7E-09	8 8E-09	7 8E-09	6 8E-09	5 8E-09	4 9E-09
5	4 6E-09	3 2E-09	3 1E-09	3.1E-09	3 0E-09	2 7E-09	2.4E-09	2 1E-09	1 8E-09	1.5E-09

Stability G — wind speed

miles	1 m/s	2 m/s	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
0 62	4 8E-07	2 3E-07	1 8E-07	1 4E-07	9 0E-08	8 1E-08	7 2E-08	6 3E-08	5 4E-08	4 6E-08
2	1.1E-07	5.1E-08	4 0E-08	3 0E-08	2.0E-08	1 8E-08	1 6E-08	1 4E-08	1.2E-08	1 0E-08
5	1 1E-08	7.5E-09	7 3E-09	7 2E-09	7.0E-09	6 3E-09	5 6E-09	4 9E-09	4 1E-09	3 4E-09

ATTACHMENT B (Page 8 of 8)

TEDE RATIOS FOR VARIOUS PATHS AND RELEASE TYPES

CTM Bypass

mi	Type 1	Type 2	Type 3	Type 4
0 62	23	5.9	7.6	22
2	23	6 0	7.6	21
5	55	13	17	52

MSLB

mi	Type 1	Type 2	Type 3	Type 4
0.62	10	10	8.9	24
2	11	11	9.2	25
5	23	23	21	59

THYROID CDE RATIOS FOR VARIOUS ACCIDENTS AND RELEASE TYPES

CTM Bypass

mi	Type 1	Type 2	Type 3	Type 4
0.62	1.1E-01	6.2E+00	2.0E+00	1.4E+00
2	1.1E-01	6 2E+00	2.0E+00	1.4E+00
5	1 1E-01	6 2E+00	2 0E+00	1.4E+00

MSLB

mi	Type 1	Type 2	Type 3	Type 4
0 62	1 1E+01	1.1E+01	4.8E+00	3.3E+00
2	1.1E+01	1.1E+01	4.8E+00	3.3E+00
5	1.1E+01	1.1E+01	4.8E+00	3.3E+00

ATTACHMENT C (Page 1 of 1)

PROJECTED TEDE and Thyroid CDE ASSESSMENT SURVEY FORM

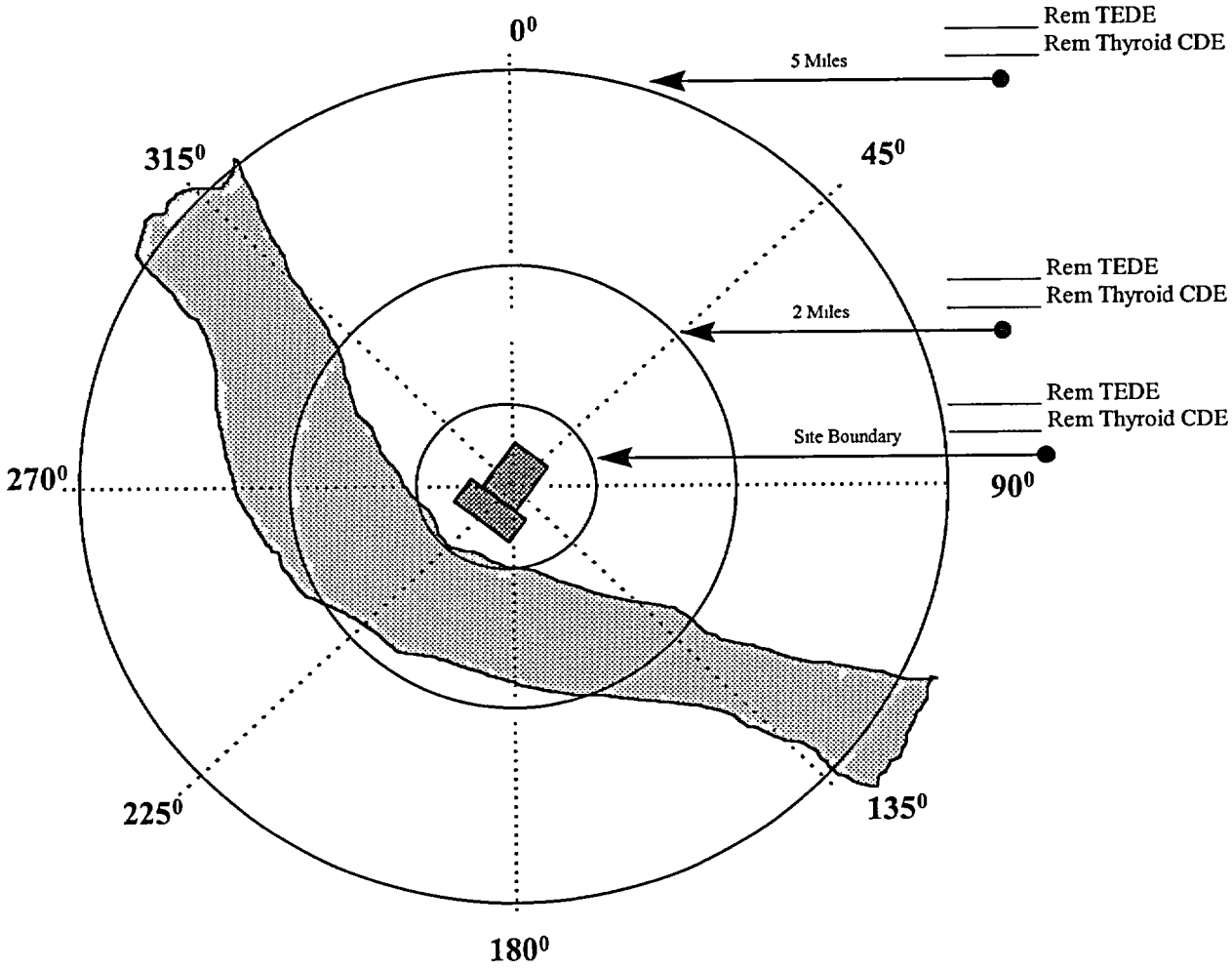
☐ STACK RELEASE
☐ GROUND-LEVEL RELEASE

TIME OF ASSESSMENT _____ RELEASE RATE _____ µCi/s

WIND SPEED _____ MILES/HR STABILITY CLASS _____

WIND DIRECTION _____ PLUME DIRECTION _____

PREPARED BY _____ DATE _____



LAST PAGE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EPIP-14

RADIOLOGICAL CONTROL PROCEDURES

REVISION 17

PREPARED BY: T. W. CORNELIUS PHONE: 2038

RESPONSIBLE ORGANIZATION. EMERGENCY PREPAREDNESS

APPROVED BY: GILBERT LITTLE DATE: 10/18/2002

EFFECTIVE DATE 10/29/2002

LEVEL OF USE: REFERENCE USE

QUALITY-RELATED

REVISION LOG

Procedure Number: EPIP-14 Revision Number: 17

Pages Affected: All

Pagination Pages: All

Description of Change:

IC-20 The revision is being conducted to revise the manual method for calculating total effective dose equivalent and include a method for calculating thyroid committed dose equivalent.

Page 6 Revised the instruction portion of the procedure to include thyroid CDE and add a statement to ensure that Attachment F is completed .
Page 7 Revised to update the title of attachments and the instruction section header
Page 11-27 Revised to update the method for calculating and reporting the results for TEDE dose projection and include a method for calculating and reporting the results for Thyroid CDE.

IC-21 EPIP-14 is being revised as a part of EP Standardization. The portion of EPIP-14 that addresses Dose Assessment is being removed from this procedure and placed into EPIP-13 No portion of the procedure is being changed. The dose assessment process is not being changed, only the location of the procedure This revision deleted pages 11-23 Pages 11-23 are not marked as revisions due to the electronic processing of tables and management of the procedure. The deleted pages were placed into EPIP-13.

1.0 PURPOSE

The purpose of this procedure is to describe actions and responsibilities of Radiological Controls (RADCON) personnel during a radiological emergency at Browns Ferry.

2.0 SCOPE

EPIP-14 will be initiated when RADCON Shift Supervisor or designee receives indications that the Emergency Plan has been activated or information regarding processes contained within this procedure are required.

EPIP-14 contains instructions for RADCON during the implementation of the Emergency Plan event classifications. The procedure additionally contains instructions for RADCON during Site Assembly and Evacuation, RADCON Lab Habitability, Issuance of Potassium Iodide, the use of the Health Physics Network, and the Alternate Personnel Decontamination Facility.

3.0 INSTRUCTIONS

3.1 Notification of Unusual Event

3.1.1 No offsite radiological problems are postulated during a Notification of Unusual Event. (NOUE). This situation should not have any major impact on RADCON.

3.1.2 Although RADCON will not automatically be called, should assistance be needed, RADCON will follow standard practices and procedures during response activities.

3.0 INSTRUCTIONS (CONTINUED)

3.2 Alert

3.2.1 When a Site Assembly is conducted, (see Section 3.4) all RADCON personnel will report to their assigned assembly areas.

3.2.2 If radiological conditions warrant, RADCON personnel will periodically take radiation, airborne (particulate and iodine), and contamination surveys of all assembly areas inside the protected area (Refer to EPIP-8, Appendix "A" and "B" for list of assembly areas).

3.2.3 A RADCON technician will accompany any personnel dispatched into areas of potential radiological hazard.

3.2.4 RADCON personnel will assist in the development of recovery plans as deemed necessary by the recovery organization. Recommendations will be made to keep exposure as low as reasonable achievable and to recommend and approve any clean up activities.

3.3 Site Area Emergency or General Emergency

3.3.1 RADCON technicians report to the lab as directed by their Shift Supervisor or designee. A site evacuation will be conducted at the SAE or GE classification, if not already completed (see Section 3 5)

3.3.2 RADCON personnel will periodically take radiation, contamination and airborne surveys as necessary to ensure no radiological hazards exist in occupied Emergency Response Facilities, (TSC, OSC, Staging Area, RADCON Lab, Chemistry Lab, Control Rooms, or other Operations areas).

3.3.3 A RADCON technician will accompany any personnel dispatched into areas of potential radiological hazard.

3.3.4 Equipment listed in CECC-EPIP-9, Attachment J, Section 1.0 may need to be transported to the environmental monitoring van. Nuclear Security (NS) will allow equipment to be removed from the protected area.

3.0 INSTRUCTIONS (CONTINUED)

3.3 Site Area Emergency or General Emergency (continued)

3.3.5 Initial offsite environmental assessment will be conducted per CECC-EPIP-9.

3.3.6 Dispatch RADCON technician to the site access control point established by NS personnel. Survey vehicles and personnel leaving the site using RM-14 friskers (or equivalent) and smear techniques, if radiological conditions warrant.

3.4 Site Assembly and Evacuation

3.4.1 RADCON technicians proceed to the RADCON Lab and read your badge into the accountability reader. If uninhabitable, see Section 3.5.

3.4.2 Sign the Accountability Roster.

3.4.3 If any plant personnel are unaccounted for, NS will form search teams, each having at least one RADCON technician as a part of the team.

3.4.4 RADCON will survey personnel and vehicles leaving the site at the NS access control point, if radiological conditions warrant Contaminated individuals will be evacuated to the Power Service Shop No. 4 Locker Room at Muscle Shoals Reservation, as directed by the OSC.

3.4.5 Should conditions exist that RADCON cannot survey all people and vehicles leaving the site, RADCON will set up a monitoring station as directed by the SED.

3.5 Radiological Control Lab Habitability

3.5.1 [NRC/C] When conditions within the Radcon Lab become uninhabitable the RADCON technicians will proceed to mechanical equipment room, control bay, Unit 3, elevation 617. [NRC/C 81-19-17]

3.5.2 [NRC/C] Report location to the RADCON Manager in the TSC. [NRC/C 81-19-17]

3.6 Issuing Potassium Iodide (KI)

3.6.1 If the TSC RADCON Manager has reason to believe that a person's projected cumulative dose to the thyroid from inhalation of radioactive iodine might exceed 10 rems (see Attachment A), the exposed person should be started immediately on a dose regimen of KI. This decision shall be immediately communicated to the SED.

3.6.1.1 If the TSC is not staffed or the RADCON Manager position has not been filled, then the senior onsite RADCON Supervisor has the authority to issue KI utilizing the bases describe in step 3 6.1

3.6.1.2 The initial dose of KI should be not delayed since thyroid blockage requires 30 to 60 minutes. Anyone authorized to initiate KI shall be familiar with the Food and Drug Administration approve package insert and be sure that each recipient is similarly informed

3.6.1.3 Prior to issuing KI to an individual, the person should be asked if he/she is allergic to iodine If the person indicates a possible sensitivity to iodine they should not be issued KI.

3.6.2 KI is stored in the plant RADCON supply cage and the REP Van instrument kits.

3.6.3 RADCON normally will not dispense a container or package of KI to TVA Personnel involved in activities to support a radiological emergency. RADCON will however dispense a single individual dose of KI to team members dispatched from the OSC.

3.6.4 Follow the dosage outlined on the package insert (Attachment B). A copy of the Food and Drug Administration approved package insert shall accompany the issuance of KI. If KI is distributed in individual doses, verbal instructions of the significant information on the package insert by a knowledgeable individual is sufficient.

3.6.5 Complete the KI Issue Report (Attachment C) or an RWP time sheet as appropriate for issuance of KI. An RWP time sheet may be used for this documentation instead of completing the Attachment C. If the RWP time sheet is used to document distribution of the KI, note the time of KI distribution on the back of the time sheet.

3.7 Use of the NRC Health Physics Network (HPN)

3.7.1 The HPN contact with the NRC will be made by the RADCON group.

3.8 Browns Ferry Alternate Personnel Decontamination Facility

3.8.1 The BFN alternate personnel decontamination facility is located at the Power Service Shop No. 4 Locker Room on the Muscle Shoals Reservation. It will be activated when the BFN personnel decontamination facility is inaccessible or incapable of handling the number of contaminated personnel.

3.8.2 When the decision is made to transport contaminated personnel to the alternate decontamination facility, BFN RADCON shall make notifications to the CECC, and the Power Service Shops.

The notification to the CECC shall include all available information at that time. Interface with state and local authorities (i.e., transportation route considerations) will be made available via the CECC.

The notification to the Power Service Shops shall include a request that the Shop 4 sewer lift station sump be emptied, followed by tagging out the power supply to the two pumps. (The sump and control panel are located adjacent to the North East corner of the Gas and Diesel Building, approximately 500 feet east of Shop 4). In the event a volume of effluent in excess of 1800 gallons is anticipated, additional containment capabilities will need to be arranged. The primary point of contact is the Supervisor, Maintenance Group, with the back-up being the Mechanical Supervisor. Notification phone numbers are listed in the Radiological Emergency Notification Directory (REND).

3.0 INSTRUCTIONS (CONTINUED)

3.8 Browns Ferry Alternate Personnel Decontamination Facility (continued)

3.8.3 Browns Ferry RADCON is responsible for the following:

- Providing appropriate personnel and equipment to operate the alternate decontamination facility.
- Calculating the amount of radioactive material in the decontamination effluent. Effluent releases will be in accordance with Standard Program and Process (SPP) - 5.1.
- Documenting appropriate records on all contaminated personnel.
- Ensuring the alternate decontamination facility is secured following decontamination activities and assisting in recovery efforts.

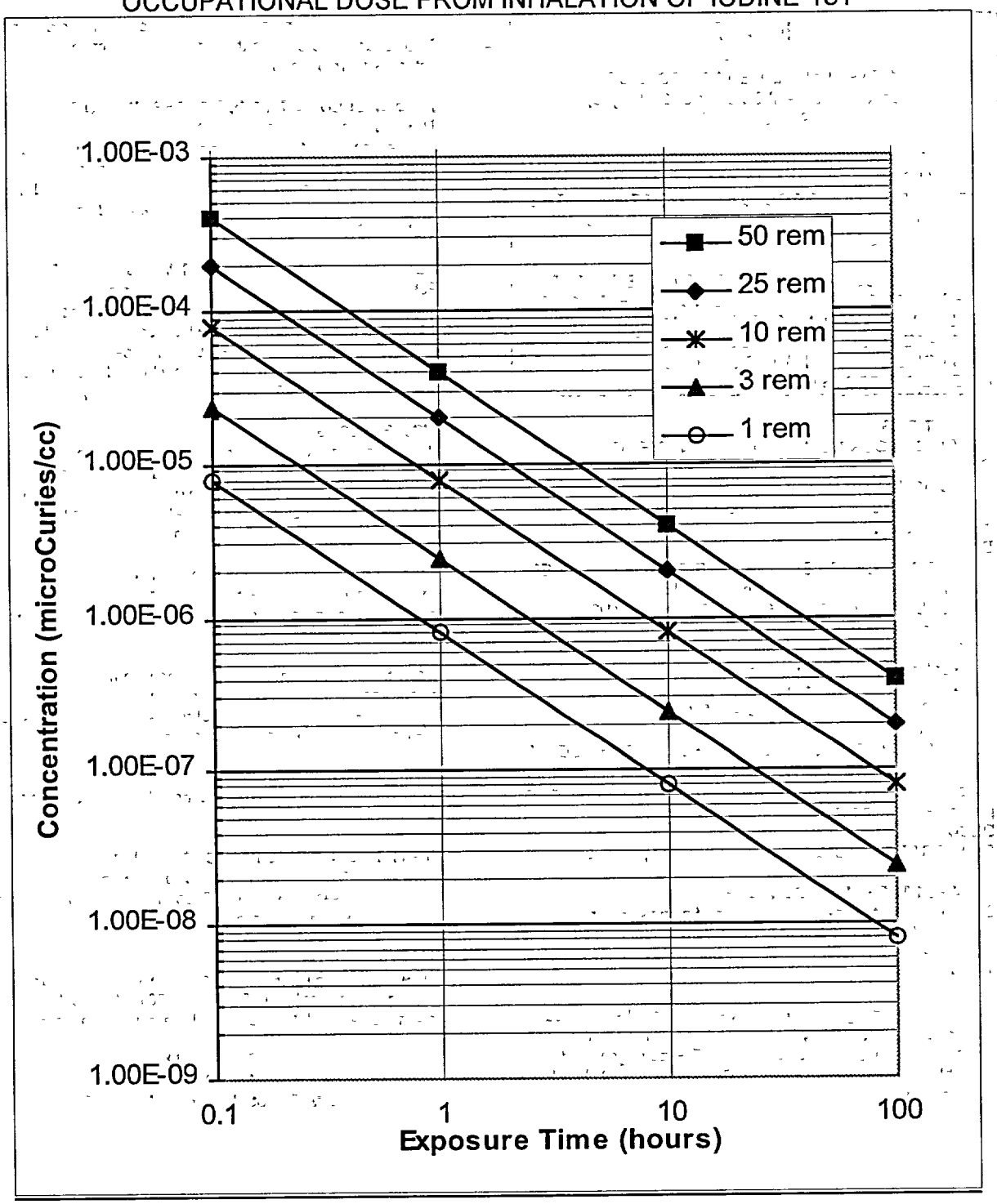
4.0 ATTACHMENTS

Attachment A - Occupational Dose From Inhalation of Iodine-131

Attachment B - Patient Package Insert

Attachment C - Potassium Iodide Issue Report

ATTACHMENT A (Page 1 of 1)
OCCUPATIONAL DOSE FROM INHALATION OF IODINE-131



ATTACHMENT B (Page 1 of 1)
PATIENT PACKAGE INSERT

IOSAT
Tablets
(POTASSIUM IODIDE TABLETS, U S P)
(pronounced poe-TASS-e-um EYE-oh-dyed)
(Abbreviated KI)

TAKE POTASSIUM IODIDE ONLY WHEN PUBLIC HEALTH OFFICIALS TELL YOU IN A RADIATION EMERGENCY, RADIOACTIVE IODINE COULD BE RELEASED INTO THE AIR. POTASSIUM IODIDE (A FORM OF IODINE) CAN HELP PROTECT YOU

IF YOU ARE TOLD TO TAKE THIS MEDICINE, TAKE IT ONE TIME EVERY 24 HOURS. DO NOT TAKE IT MORE OFTEN MORE WILL NOT HELP YOU AND MAY INCREASE THE RISK OF SIDE EFFECTS. DO NOT TAKE THIS DRUG IF YOU KNOW YOU ARE ALLERGIC IODIDE (SEE SIDE EFFECTS BELOW)

INDICATIONS
THYROID BLOCKING IN A RADIATION EMERGENCY ONLY
DIRECTIONS FOR USE
Use only as directed be State or local public health authorities in the event of a radiation emergency
Dose
ADULTS AND CHILDREN ONE YEAR OF AGE OR OLDER One (1) tablet once a day Crush for small children
BABIES UNDER ONE YEAR OF AGE: One half (1/2) tablet once a day Crush first
DOSAGE Take tablets 10 days unless directed otherwise by State or local public health authorities
Store at controlled room temperature between 15^{0} and 30^{0}C (59^{0} to 86^{0}F). Keep package dry and foil packets intact
WARNING
POTASSIUM IODIDE SHOULD NOT BE USED BY PEOPLE ALLERGIC TO IODIDE Keep out of the reach of children In case of overdose or allergic reaction, contact a physician or the public health authority.
DESCRIPTION
Each IOSAT™ TABLET contains 130 mg of potassium iodide
HOW POTASSIUM IODIDE WORKS
Certain forms of iodine help your thyroid glands work right Most people get the iodine they need from foods, iodized salt or fish The thyroid can "store" or hold only a certain amount of iodine

In a radiation emergency, radioactive iodine may be released in the air This material may be breathed or swallowed it may enter the thyroid gland and damage it. The damage would probably not show itself for years Children are most likely to have thyroid damage

If you take potassium iodide, it will fill up your thyroid gland This reduces the change that harmful radioactive iodine will enter the thyroid gland

WHO SHOULD NOT TAKE POTASSIUM IODIDE
The only people who should not take potassium iodide are people who know they are allergic to iodide. You may take potassium iodide even if you are taking medicines for a thyroid problem (for example, a thyroid hormone or antithyroid drug) Pregnant and nursing women and babies and children may also take this drug.

HOW AND WHEN TO TAKE POTASSIUM IODIDE
Potassium Iodide should be taken as soon as possible after public health officials tell you you should take one dose every 24 hours More will not help you because the thyroid can "hold" only limited amounts of iodine Larger doses will increase the risk of side effects You will probably be told not to take the drug for more than 10 days

SIDE EFFECTS
Usually, side effects of potassium iodide happen when people take higher doses for a long time You should be careful not to take more than the recommended dose or take it for longer than you are told Side effects are unlikely because of the low dose and the short time you will be taking the drug

Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea)

A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.

Taking iodide may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland, or enlargement of the thyroid gland (goiter).

WHAT TO DO IF SIDE EFFECTS OCCUR
If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide. Then, if possible, call a doctor or public health authority for instructions

HOW SUPPLIED
IOSAT™ TABLETS (Potassium Iodide Tablets, U S P) packages of 14 tablets (NDC 51803-001-01) Each white, round, scored tablet contains 130 mg potassium iodide

Distributed by
ANBEX, INC
15W 75^{th} St , New York, N Y 10023

ATTACHMENT C (Page 1 of 1)
POTASSIUM IODIDE ISSUE REPORT

NAME	SSN	Time of Exposure	Time of Initial KI Dose	Package Insert Issued	Issue Agent
1					
2					
3					
4					
5					
6.					
7.					
8					
9					
10					
11					
12					
13					
14.					
15					
16					
17.					
18					
19					
20					
21.					
22.					
23					
24					
25					
26					
27					
28					
29					
30					

LAST PAGE