

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

October 2, 2001

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

Serial No. 01-562  
NAPS/JHL  
Docket Nos. 50-338  
50-339  
License Nos. NPF-4  
NPF-7

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**NORTH ANNA POWER STATION UNITS 1 AND 2**  
**REVISION TO EMERGENCY PLAN IMPLEMENTING PROCEDURE**

Pursuant to 10 CFR 50.54(q), enclosed are recent revisions to a North Anna Power Station Emergency Plan Implementing Procedures. The revisions do not implement actions that decrease the effectiveness of our Emergency Plan. The Emergency Plan and Implementing Procedures continue to meet the standards of 10 CFR 50.47(b).

Please update your manual by performing the actions described in Attachment 1, Tabulation of Changes.

Very truly yours,



D. A. Heacock  
Site Vice President

Commitments Stated or Implied: None.

Enclosures

cc: U.S. Nuclear Regulatory Commission (2 copies)  
Region II  
Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, GA 30303

Mr. M. J. Morgan  
NRC Senior Resident Inspector  
North Anna Power Station

2045

**ATTACHMENT 1  
TABULATION OF CHANGES**

**VIRGINIA ELECTRIC AND POWER COMPANY  
REVISION TO NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURES**

Enclosed is a recent revision to a North Anna Power Station Emergency Plan Implementing Procedures (EPIP). Please take the following actions in order to keep your manual updated.

<b>REMOVE AND DESTROY</b>	<b>DATED</b>	<b>INSERT</b>	<b>EFFECTIVE DATE</b>
EPIP-1.01, Rev. 33	10/06/00	EPIP-1.01, Rev. 34	09/13/01
EPIP-1.06, Rev. 03	10/06/00	EPIP-1.06, Rev. 04	09/05/01
EPIP-2.01, Rev. 22	02/15/01	EPIP-1.01, Rev. 24	09/26/01
EPIP-4.08, Rev. 12	07/21/95	EPIP-1.01, Rev. 13	09/13/01
EPIP-4.09, Rev. 11	07/21/95	EPIP-1.01, Rev. 12	09/13/01
EPIP-4.26, Rev. 10	11/13/96	EPIP-1.01, Rev. 11	09/13/01

Emergency Plan Privacy and Proprietary Material has been removed. Reference Generic Letter No. 81-27.

Note: EPIP-2.01 Rev. 23 had an effective date of September 5, 2001, and was subsequently revised on September 20, 2001 in Rev. 24, with an effective date of September 26, 2001. Rather than issue Rev. 23 knowing Rev. 24 was imminent, only Rev. 24 is being issued.

NORTH ANNA POWER STATION  
LIST OF NAPS EMERGENCY PLAN IMPLEMENTATION PROCEDURES  
CHECK DMIS FOR LATEST DOCUMENT INFORMATION

DOCUMENT NUMBER	REV	APPROVAL **DATE**	EFFECT** **DATE**	DOCUMENT TITLE
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EPIP-1.01	034	07/26/01	09/13/01	EMERGENCY MANAGER CONTROLLING PROCEDURE
EPIP-1.02	011	09/07/99	10/01/99	RESPONSE TO NOTIFICATION OF UNUSUAL EVENT
EPIP-1.03	014	09/07/99	10/01/99	RESPONSE TO ALERT
EPIP-1.04	014	09/07/99	10/01/99	RESPONSE TO SITE AREA EMERGENCY
EPIP-1.05	016	09/07/99	10/01/99	RESPONSE TO GENERAL EMERGENCY
EPIP-1.06	004	09/05/01	09/05/01	PROTECTIVE ACTION RECOMMENDATIONS
EPIP-2.01	024	09/24/01	09/26/01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS
EPIP-2.02	014	01/04/99	01/29/99	NOTIFICATION OF NRC
EPIP-2.04	003	08/07/92	08/07/92	TRANSMITTAL OF PLANT, RADIOLOGICAL AND EMERGENCY STATUS
EPIP-3.02	018	12/17/97	01/07/98	ACTIVATION OF TECHNICAL SUPPORT CENTER
EPIP-3.03	012	12/20/93	01/01/94	ACTIVATION OF OPERATIONAL SUPPORT CENTER
EPIP-3.04	015	07/14/98	07/20/98	ACTIVATION OF LOCAL EMERGENCY OPERATIONS FACILITY
EPIP-3.05	001	09/07/99	10/01/99	AUGMENTATION OF EMERGENCY RESPONSE ORGANIZATION
EPIP-4.01	016	05/12/99	05/17/99	RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE
EPIP-4.02	012	07/25/00	08/02/00	RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE
EPIP-4.03	011	12/20/93	01/01/94	DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE
EPIP-4.04	009	11/21/94	11/28/94	EMERGENCY PERSONNEL RADIATION EXPOSURE
EPIP-4.05	009	01/28/00	02/04/00	RESPIRATORY PROTECTION AND KI ASSESSMENT
EPIP-4.06	009	12/21/95	12/28/95	PERSONNEL MONITORING AND DECONTAMINATION
EPIP-4.07	014	09/29/00	10/06/00	PROTECTIVE MEASURES
EPIP-4.08	013	07/26/01	09/13/01	INITIAL OFFSITE RELEASE ASSESSMENT
EPIP-4.09	012	07/26/01	09/13/01	SOURCE TERM ASSESSMENT
EPIP-4.10	010	04/23/98	04/28/98	DETERMINATION OF X/Q

NORTH ANNA POWER STATION  
LIST OF NAPS EMERGENCY PLAN IMPLEMENTATION PROCEDURES  
CHECK DMIS FOR LATEST DOCUMENT INFORMATION

DOCUMENT NUMBER	REV	APPROVAL **DATE**	EFFECT** **DATE**	DOCUMENT TITLE
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EPIP-4.13	009	09/29/00	10/06/00	OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA
EPIP-4.14	007	12/20/93	01/01/94	INPLANT MONITORING
EPIP-4.15	011	02/18/00	02/28/00	ONSITE MONITORING
EPIP-4.16	014	02/18/00	02/28/00	OFFSITE MONITORING
EPIP-4.17	014	08/12/98	08/14/98	MONITORING OF EMERGENCY RESPONSE FACILITIES
EPIP-4.18	011	08/12/98	08/14/98	MONITORING OF LEOF
EPIP-4.21	008	12/20/93	01/01/94	EVACUATION AND REMOTE ASSEMBLY AREA MONITORING
EPIP-4.22	013	04/02/93	04/02/93	POST ACCIDENT SAMPLING OF CONTAINMENT AIR
EPIP-4.23	013	03/13/96	03/18/96	POST ACCIDENT SAMPLING OF REACTOR COOLANT
EPIP-4.24	010	07/20/99	07/22/99	GASEOUS EFFLUENT SAMPLING DURING AN EMERGENCY
EPIP-4.25	008	07/23/93	07/23/93	LIQUID EFFLUENT SAMPLING DURING AN EMERGENCY
EPIP-4.26	011	07/26/01	09/13/01	HIGH LEVEL ACTIVITY SAMPLE ANALYSIS
EPIP-4.28	007	01/09/97	01/14/97	TSC/LEOF RADIATION MONITORING SYSTEM
EPIP-4.30	004	01/04/99	01/08/99	USE OF MIDAS CLASS A MODEL
EPIP-4.31	003	06/20/94	06/20/94	USE OF MIDAS CLASS B MODEL
EPIP-4.33	003	11/28/00	11/30/00	HEALTH PHYSICS NETWORK COMMUNICATIONS
EPIP-4.34	002	02/18/00	02/28/00	FIELD TEAM RADIO OPERATOR INSTRUCTIONS
EPIP-5.01	011	12/11/96	12/17/96	TRANSPORTATION OF CONTAMINATED INJURED PERSONNEL
EPIP-5.03	016	02/18/00	02/28/00	PERSONNEL ACCOUNTABILITY
EPIP-5.04	008	07/20/99	07/22/99	ACCESS CONTROL
EPIP-5.05	013	06/25/96	07/02/96	SITE EVACUATION
EPIP-5.07	011	07/25/00	08/02/00	ADMINISTRATION OF RADIOPROTECTIVE DRUGS
EPIP-5.08	007	11/28/00	11/30/00	DAMAGE CONTROL GUIDELINE

NORTH ANNA POWER STATION  
LIST OF NAPS EMERGENCY PLAN IMPLEMENTATION PROCEDURES  
CHECK DMIS FOR LATEST DOCUMENT INFORMATION

DOCUMENT NUMBER	REV	APPROVAL **DATE**	EFFECT** **DATE**	DOCUMENT TITLE
EPIP-5.09	003	03/26/99	03/31/99	SECURITY TEAM LEADER CONTROLLING PROCEDURE
EPIP-6.01	007	05/12/99	05/17/99	RE-ENTRY/RECOVERY GUIDELINE

VIRGINIA POWER  
NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-1.01	EMERGENCY MANAGER CONTROLLING PROCEDURE	34
	(With 4 Attachments)	PAGE 1 of 7

**PURPOSE**

To assess potential emergency conditions and initiate corrective actions.

**LEVEL 2 DISTRIBUTION**  
This Procedure Should Be Verified  
And Approved To A Controlled Source  
As Required to Perform Work

**ENTRY CONDITIONS**

Any of the following:

1. Another station procedure directs initiation of this procedure.
2. A potential emergency condition is reported to the Shift Supervisor.

Approvals on File

Effective Date 9/13/01

NUMBER EPIP-1.01	PROCEDURE TITLE EMERGENCY MANAGER CONTROLLING PROCEDURE	REVISION 34  PAGE 2 of 7
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

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**CAUTION:** Declaration of the highest emergency class for which an Emergency Action Level is exceeded shall be made.

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**NOTE:** The ERFCS is potentially unreliable in the event of an earthquake. Therefore, ERFCS parameters should be evaluated for accuracy should this situation occur.

#### 1 EVALUATE EMERGENCY ACTION LEVELS:

- a) Determine event category using Attachment 1, EMERGENCY ACTION LEVEL TABLE INDEX
- b) Review EAL Tab associated with event category
- c) Use Control Room monitors, ERFCS, and outside reports to get indications of emergency conditions listed in the EAL Table
- d) Verify EAL - CURRENTLY EXCEEDED
- d) IF basis for EAL no longer exists when discovered AND no other reasons exist for an emergency declaration, THEN do the following:
  - RETURN TO procedure in effect.
  - GO TO VPAP-2802, 'NOTIFICATIONS AND REPORTS, to make one-hour, non-emergency reports for classification without declaration.

IF EAL was NOT exceeded, THEN RETURN TO procedure in effect.

(STEP 1 CONTINUED ON NEXT PAGE)

NUMBER	PROCEDURE TITLE	REVISION
EPIP-1.01	EMERGENCY MANAGER CONTROLLING PROCEDURE	34
		PAGE 3 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>1 EVALUATE EMERGENCY ACTION LEVELS: (Continued)</p> <p>e) Record procedure initiation:</p> <ul style="list-style-type: none"> <li>By: _____</li> <li>Date: _____</li> <li>Time: _____</li> </ul> <p>f) Initiate a chronological log of events</p> <p>g) Declare position of Station Emergency Manager</p> <p><b>NOTE:</b> Assembly, accountability and/or initiation of facility staffing may not be desired during certain situations (e.g., security event, severe weather, anticipated grid disturbance) or may have already been completed. These activities should be implemented as quickly as achievable given the specific situation.</p>	
<p>_____ 2</p>	<p>CHECK - CONDITIONS ALLOW FOR NORMAL IMPLEMENTATION OF EMERGENCY RESPONSE ACTIONS</p>	<p><u>IF</u> deviation from normal emergency response actions warranted, <u>THEN</u> do the following:</p> <p>a) Refer to Attachment 4, Considerations for Operations Response Under Abnormal Conditions.</p> <p>b) Consider applicability of 50.54(x).</p> <p>c) <u>IF</u> classification/assembly announcement deferred, <u>THEN</u> GO TO Step 4.</p>

NUMBER EPIP-1.01	PROCEDURE TITLE EMERGENCY MANAGER CONTROLLING PROCEDURE	REVISION 34 PAGE 4 of 7
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3	<p>NOTIFY PLANT STAFF OF ALERT OR HIGHER CLASSIFICATION:</p> <p>a) Check classification - ALERT OR HIGHER</p> <p>b) Check if emergency assembly and accountability - PREVIOUSLY CONDUCTED</p> <p>c) Have Control Room sound EMERGENCY alarm and make announcement on station Gai-Tronics system as follows:  "(Emergency classification) has been declared as the result of"  _____  (event)</p> <p>d) Repeat Step 3.c</p>	<p>a) GO TO Step 4.</p> <p>b) Do the following:</p> <p>1) Have Control Room sound EMERGENCY alarm and make announcement on station Gai-Tronics system as follows:  "(Emergency classification) has been declared as the result of"  _____  (event)  "All Emergency Response personnel report to your assigned stations"  "All contractor personnel not responding to the emergency and all visitors report to the Security Building"  "All other personnel report to your Emergency Assembly Areas"</p> <p>2) Repeat RNO Step 3.b.1.</p> <p>3) GO TO Step 4.</p>

NUMBER EPIP-1.01	PROCEDURE TITLE EMERGENCY MANAGER CONTROLLING PROCEDURE	REVISION 34 PAGE 5 of 7
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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**CAUTION:** Continue through this and all further instructions unless otherwise directed to hold.

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\_\_\_\_\_ 4 INITIATE SUPPORTING PROCEDURES:

- a) Direct Emergency Communicators to initiate the following procedures:
  - 1) EPIP-2.01, NOTIFICATION OF STATE AND LOCAL GOVERNMENTS
  - 2) EPIP-2.02, NOTIFICATION OF NRC
- b) Direct HP to initiate EPIP-4.01, RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE
- c) Establish communications with Security Team Leader:
  - 1) Provide Security with current emergency classification
  - 2) Notify Security which Operations Shift is designated for coverage
  - 3) Direct Security to initiate EPIP-5.09, SECURITY TEAM LEADER CONTROLLING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-1.01	EMERGENCY MANAGER CONTROLLING PROCEDURE	34
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 5	CHECK TSC - ACTIVATED	<p>IF TSC <u>NOT</u> activated, <u>THEN</u> do the following:</p> <ul style="list-style-type: none"> <li>a) Have STA report to the Control Room.</li> <li>b) Notify Superintendent Operations or Operations Manager On Call.</li> <li>c) Consider having Radiological Assessment Director report to the Control Room.</li> <li>d) <u>WHEN</u> relief SEM arrives, <u>THEN</u> perform turnover using EPIP-1.01, Attachment 3, Turnover Checklist.</li> </ul>
_____ 6	<p>IMPLEMENT EPIP FOR EMERGENCY CLASSIFICATION IN EFFECT:</p> <ul style="list-style-type: none"> <li>• <b>Notification of Unusual Event</b> - GO TO EPIP-1.02, RESPONSE TO NOTIFICATION OF UNUSUAL EVENT</li> <li>• <b>Alert</b> - GO TO EPIP-1.03, RESPONSE TO ALERT</li> <li>• <b>Site Area Emergency</b> - GO TO EPIP-1.04, RESPONSE TO SITE AREA EMERGENCY</li> <li>• <b>General Emergency</b> - GO TO EPIP-1.05, RESPONSE TO GENERAL EMERGENCY</li> </ul>	

NUMBER EPIP-1.01	PROCEDURE TITLE EMERGENCY MANAGER CONTROLLING PROCEDURE	REVISION 34 PAGE 7 of 7
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\_\_\_\_ 7 NOTIFY OFFSITE AUTHORITIES OF  
EMERGENCY TERMINATION:

- a) State and local governments  
(made by LEOF or CEOF when  
activated)
- b) NRC

\_\_\_\_ 8 NOTIFY STATION PERSONNEL ABOUT THE  
FOLLOWING:

- Emergency termination
- Facility de-activation
- Selective release of personnel
- Completion and collection of  
procedures
- Recovery

\_\_\_\_ 9 TERMINATE EPIP-1.01:

- Give completed EIPs, forms and  
other applicable records to  
Nuclear Emergency Preparedness  
(TSC Emergency Procedures  
Coordinator if TSC activated)

• Completed By: \_\_\_\_\_

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

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

-END-

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE	34
ATTACHMENT	INDEX	PAGE
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CAUTION: • Declaration of the highest emergency class for which an EAL is exceeded shall be made.

• Emergency Action Levels shall be conservatively classified based on actual or anticipated plant conditions.

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NOTE: Design Change Package 99-006, Replacement of Ventilation Radiation Monitors (NAPS Units 1 & 2), replaces KAMAN process and vent stack particulate, iodine and gaseous radiation monitors with a radiation monitor system manufactured by MGP Instruments (MGPI). Affected EALs are: B-4, B-7, C-7, C-9, E-3, E-5, G-1 and G-2. Both KAMAN and MGPI indications are provided for classification depending upon which system is in service. During the interim period when neither system is in service, indications are provided for classification based on HP monitoring and assessments.

EVENT CATEGORY:

TAB

1. Safety, Shutdown, or Assessment System Event.....A
2. Reactor Coolant System Event.....B
3. Fuel Failure or Fuel Handling Accident.....C
4. Containment Event.....D
5. Radioactivity Event.....E
6. DELETED
7. Loss of Secondary Coolant.....G
8. Electrical Failure.....H
9. Fire.....I
10. Security Event.....J
11. Hazard to Station Operation.....K
12. Natural Events.....L
13. Miscellaneous Abnormal Events.....M

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB A)	34
ATTACHMENT 1	SAFETY, SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	PAGE 2 of 43

CONDITION/APPLICABILITY

INDICATION

CLASSIFICATION

CAUTION: EAL C.2 is duplicated below for cross-reference/comparison to EAL A.1:

C.2. Probable large radioactivity release initiated by loss of heat sink leading to core degradation

MODES 1, 2, 3 & 4

Loss of Main Feedwater System, Condensate System and Auxiliary Feedwater System

GENERAL  
EMERGENCY

1. Loss of function needed for unit HSD condition

MODES 1, 2, 3 & 4

- Total loss of the Charging/SI System

OR

Total loss of the Main Feedwater and Auxiliary Feedwater systems

SITE AREA  
EMERGENCY

2. Failure of the Reactor Protection System to initiate and complete a required trip while at power

MODES 1 & 2

- Reactor trip setpoint and coincidences - EXCEEDED

AND

- Automatic trip from RPS - FAILED

AND

- Manual trip from Control Room - FAILED

SITE AREA  
EMERGENCY

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB A) SAFETY, SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	34
ATTACHMENT 1		PAGE 3 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>3. Inability to monitor a significant transient in progress</p> <p>MODES 1, 2, 3 &amp; 4</p>	<ul style="list-style-type: none"> <li>Most (&gt;75%) or all annunciator alarms on panels "A" to "K" - NOT AVAILABLE</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>All computer monitoring capability (e.g., plant computer, ERFCs) - NOT AVAILABLE</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Significant transient - IN PROGRESS (e.g., reactor trip, SI actuation, turbine runback &gt;25% thermal reactor power, thermal power oscillations &gt;10%)</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Inability to directly monitor any one of the following using Control Room indications: <ul style="list-style-type: none"> <li>Subcriticality</li> <li>Core Cooling</li> <li>Heat Sink</li> <li>Vessel Integrity</li> <li>Containment Integrity</li> </ul> </li> </ul>	<p>SITE AREA EMERGENCY</p>
<p>4. Evacuation of Main Control Room with control not established within 15 minutes</p> <p>ALL MODES</p>	<p>Evacuation of the Control Room with local shutdown control not established within 15 minutes</p>	<p>SITE AREA EMERGENCY</p>

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB A) SAFETY, SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	34
ATTACHMENT 1		PAGE 4 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
5. Total loss of function needed for unit CSD condition  MODES 5 & 6	<ul style="list-style-type: none"> <li>Secondary system cooling capability - UNAVAILABLE</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Loss of any of the following systems:               <ul style="list-style-type: none"> <li>Service Water</li> <li>Component Cooling</li> <li>RHR</li> </ul> </li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>RCS temperature GREATER THAN 140 °F</li> </ul>	ALERT
6. Failure of the Reactor Protection System to complete a trip which takes the Reactor Subcritical  MODES 1 & 2	<ul style="list-style-type: none"> <li>Reactor trip setpoint and coincidences - EXCEEDED</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Automatic trip from RPS - FAILED</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Manual trip - REQUIRED</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Manual trip from Control Room - SUCCESSFUL</li> </ul>	ALERT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB A) SAFETY, SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	34
ATTACHMENT 1		PAGE 5 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>7. Unplanned loss of safety system annunciators with compensatory indicators unavailable or a transient in progress</p> <p>MODES 1, 2, 3 &amp; 4</p>	<ul style="list-style-type: none"> <li>Unplanned loss of most (&gt;75%) or all annunciator alarms on panels "A" to "K" for GREATER THAN 15 minutes</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>All computer monitoring capability (e.g., plant computer, ERFCS) - NOT AVAILABLE</li> </ul> <p><u>OR</u></p> <p>Significant transient - INITIATED OR IN PROGRESS (e.g., reactor trip, SI, turbine runback &gt; 25% thermal reactor power, thermal power oscillations &gt; 10%)</p>	ALERT
<p>8. Evacuation of Main Control Room required</p> <p>ALL MODES</p>	<p>Evacuation of the Control Room with shutdown control established within 15 minutes</p>	ALERT
<p>9. Inability to reach required mode within technical specification limits</p> <p>MODES 1, 2, 3 &amp; 4</p>	<ul style="list-style-type: none"> <li>Intentional reduction in power, load or temperature IAW T.S. Action Statement - HAS COMMENCED</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>T.S. Action Statement time limit for mode change - CANNOT BE MET</li> </ul>	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB A) SAFETY, SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	34
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>10. Failure of a safety or relief valve to close after pressure reduction, which may affect the health and safety of the public</p> <p>MODES 1, 2, 3, 4 &amp; 5</p>	<ul style="list-style-type: none"> <li>• <u>RCS</u></li> <li>• RCS pressure - LESS THAN 2000 psig</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>NDT Protection System - IN SERVICE</p> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>• Any indication after lift or actuation that Pressurizer Safety or PORV - REMAINS OPEN</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>• Flow - UNISOLABLE</li> </ul> <ul style="list-style-type: none"> <li>• <u>Main Steam</u></li> <li>• Excessive Steam Generator Safety, PORV or Decay Heat Release flow as indicated by rapid RCS cooldown rate</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>• Main Steam pressure greater than 100 psi below setpoint of affected valve</li> </ul>	<p>NOTIFICATION OF UNUSUAL EVENT</p>
<p>11. Unplanned loss of most or all safety system annunciators for greater than 15 minutes</p> <p>MODES 1, 2, 3 &amp; 4</p>	<ul style="list-style-type: none"> <li>• Unplanned loss of most (&gt;75%) or all annunciators on panels "A" to "K" for GREATER THAN 15 minutes</li> </ul>	<p>NOTIFICATION OF UNUSUAL EVENT</p>

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB A)	34
ATTACHMENT 1	SAFETY, SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	PAGE 7 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
12. Loss of communications capability  ALL MODES	<ul style="list-style-type: none"> <li>Station PBX phone system - FAILED</li> <li><u>AND</u></li> <li>Station Gai-tronics system - FAILED</li> <li><u>AND</u></li> <li>Station UHF radio system - FAILED</li> </ul>	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE	34
ATTACHMENT	(TAB B)	PAGE
1	REACTOR COOLANT SYSTEM EVENT	8 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Loss of 2 of 3 fission product barriers with potential loss of 3rd barrier  ALL MODES	Any two of a), b) or c) exist and the third is imminent:  a) Fuel clad integrity failure as indicated by any of the following:  <ul style="list-style-type: none"> <li>RCS specific activity greater than or equal to 300.0 <math>\mu\text{Ci/gram}</math> dose equivalent I-131</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>5 or more core exit thermocouples greater than 1200 °F</p> <p style="text-align: center;"><u>OR</u></p> <p>Containment High Range Radiation Monitor</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> RM-RMS-165, -166 or  RM-RMS-265, -266  GREATER THAN  <math>1.88 \times 10^2</math> R/hr </div> b) Loss of RCS integrity as indicated by any of the following:  <ul style="list-style-type: none"> <li>RCS pressure greater than 2735 psig</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Loss of Reactor Coolant in progress</p> c) Loss of containment integrity as indicated by any of the following:  <ul style="list-style-type: none"> <li>Containment pressure greater than 60 psia and not decreasing</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Release path to environment -EXISTS</p>	GENERAL EMERGENCY

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CONDITION/APPLICABILITY	INDICATION	CLASSIFICATION
2. Fuel failure with steam generator tube rupture  ALL MODES	<p>Any two of a), b) or c) exist and the third is imminent:</p> <p>a) Fuel clad integrity failure as indicated by any of the following:</p> <ul style="list-style-type: none"> <li>RCS specific activity greater than 300 <math>\mu\text{Ci}/\text{gram}</math> dose equivalent I-131</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>5 or more core exit thermocouples GREATER THAN 1200 °F</p> <p style="text-align: center;"><u>OR</u></p> <p>High Range Letdown radiation monitor</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> 1-CH-RI-128 or 2-CH-RI-228 GREATER THAN <math>5.9 \times 10^4</math> mR/hr </div> <p>b) Steam Generator tube rupture as indicated by both of the following:</p> <ul style="list-style-type: none"> <li>SI coincidence - SATISFIED</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>Steam Generator tube rupture -IN PROGRESS</li> </ul> <p>c) Loss of secondary integrity associated with ruptured steam generator pathway as indicated by any of the following:</p> <ul style="list-style-type: none"> <li>Steam Generator PORV - OPEN</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Main Steam Code Safety Valve - OPEN</p> <p style="text-align: center;"><u>OR</u></p> <p>Loss of secondary coolant outside containment - IN PROGRESS</p>	GENERAL EMERGENCY

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3. RCS leak rate limit - EXCEEDED  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Loss of Reactor Coolant in progress and inventory balance indicates leakage GREATER THAN 300 gpm</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>Pressurizer level cannot be maintained with two (2) or more Charging/SI pumps in operation</li> </ul>	SITE AREA EMERGENCY

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
4. Gross primary to secondary leakage with loss of offsite power  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Steam Generator Tube Rupture - IN PROGRESS  <u>AND</u></li> <li>Safety Injection - REQUIRED  <u>AND</u></li> <li>Vent Vent A Kaman Monitor  <div>RM-VG-179 GREATER THAN 1.3 x 10<sup>8</sup> µCi/sec</div>  <u>OR</u>  HP determines Site Boundary DDE GREATER THAN 50 mrem/hr  <u>OR</u>  Vent Vent A MGPI Monitor  <div>RM-VG-179 GREATER THAN 1.25 x 10<sup>8</sup> µCi/sec</div>  <u>OR</u>  Steam Generator Blowdown monitor on affected pathway  <div>RM-SS-122, -222 RM-SS-123, -223 RM-SS-124, -224 GREATER THAN 1x10<sup>6</sup> cpm</div>  <u>AND</u></li> <li>A subsequent loss of offsite power indicated by zero volts on voltmeters for 4160V buses D, E, &amp; F</li> </ul>	SITE AREA EMERGENCY

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EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB B) REACTOR COOLANT SYSTEM EVENT	34
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
5. RCS leak rate limit - EXCEEDED  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Pressurizer level cannot be maintained greater than 20% with one (1) Charging/SI pump in operation</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>RCS inventory balance indicates leakage - greater than 50 gpm</li> </ul>	ALERT
6. Gross primary to secondary leakage  MODES 1, 2, 3, & 4	<p>Steam Generator Tube Rupture - IN PROGRESS</p> <p><u>AND</u></p> <p>Safety Injection - REQUIRED</p>	ALERT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB B)	34
ATTACHMENT 1	REACTOR COOLANT SYSTEM EVENT	PAGE 13 of 43

CONDITION/APPLICABILITY	INDICATION	CLASSIFICATION
7. Excessive primary to secondary leakage with loss of offsite power  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Intentional reduction in power, load or temperature because the unit has entered an Action Statement or will exceed an LCO</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Vent Vent A Kaman Monitor</li> </ul> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> RM-VG-179 GREATER THAN  <math>1.83 \times 10^6 \mu\text{Ci/sec}</math> </div> <p><u>OR</u></p> <p>HP assessment of sample results indicates GREATER THAN 10 times ODCM allowable limit (Alert per EAL E-3)</p> <p><u>OR</u></p> <p>Vent Vent A MGPI Monitor</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> RM-VG-179 GREATER THAN  <math>1.73 \times 10^6 \mu\text{Ci/sec}</math> </div> <p><u>OR</u></p> <p>Steam Generator Blowdown monitor on affected pathway</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> RM-SS-122, -222  RM-SS-123, -223  RM-SS-124, -224  GREATER THAN <math>1 \times 10^5</math> cpm </div> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>A subsequent loss of offsite power indicated by zero volts on voltmeters for 4160V buses D, E, &amp; F</li> </ul>	ALERT

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
8. RCS leak rate requiring plant shutdown IAW T.S. 3.4.6.2 or 3.4.6.3  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Intentional reduction in power, load or temperature because the unit has entered an action statement or will exceed an LCO</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Unidentified RCS leakage - greater than 1 gpm</li> </ul> <p><u>OR</u></p> <p>Identified leakage - greater than 10 gpm</p> <p><u>OR</u></p> <p>Controlled leakage to RCP Seals - greater than 30 gpm total</p> <p><u>OR</u></p> <p>Any pressure boundary leakage - EXISTS</p>	NOTIFICATION OF UNUSUAL EVENT
9. Primary to Secondary leakage - greater than 1 gpm  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Intentional reduction in power, load or temperature because the unit has entered an action statement or will exceed an LCO</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Primary to Secondary leakage greater than 1 gpm</li> </ul> <p><u>OR</u></p> <p>N-16 monitor indicates primary to secondary leakage greater than T. S. allowable limits</p>	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB C)	34
ATTACHMENT 1	FUEL FAILURE OR FUEL HANDLING ACCIDENT	PAGE 15 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Probable large radioactivity release initiated by LOCA with ECCS failure leading to core degradation  ALL MODES	<ul style="list-style-type: none"> <li>Loss of reactor coolant in progress</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>RCS specific activity - greater than 300 <math>\mu\text{Ci/gram}</math> dose equivalent I-131</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Containment High Range Radiation Monitor</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> RM-RMS-165, -166 or  RM-RMS-265, -266  GREATER THAN  <math>1.88 \times 10^2</math> R/hr </div> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>High or low head ECCS flow not being delivered to the core (if expected by plant conditions)</li> </ul>	GENERAL EMERGENCY

CAUTION: EAL A.1 is duplicated below for cross-reference/comparison to EAL C.2:

A.1. Loss of function needed for unit HSD condition  MODES 1, 2, 3 & 4	<ul style="list-style-type: none"> <li>Total loss of the Charging/SI System</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Total loss of the Main Feedwater and Auxiliary Feedwater systems</p>	SITE AREA EMERGENCY
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2. Probable large radioactivity release initiated by loss of heat sink leading to core degradation  MODES 1, 2, 3 & 4	Loss of Main Feedwater System, Condensate System and Auxiliary Feedwater System	GENERAL EMERGENCY
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3. Probable large radioactivity release initiated by failure of protection system to bring Rx subcritical and causing core degradation  ALL MODES	<ul style="list-style-type: none"> <li>Rx nuclear power after a trip - greater than 5%</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>RCS pressure greater than or equal to 2485 psig</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Containment pressure and temperature rapidly increasing</p>	GENERAL EMERGENCY
4. Probable large radioactivity release initiated by loss of AC power and all feedwater  ALL MODES	<ul style="list-style-type: none"> <li>Loss of all onsite and offsite AC power</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>Turbine Driven Auxiliary Feedwater Pump not operable</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>Restoration of either of the above not likely within 2 hours</li> </ul>	GENERAL EMERGENCY

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
5. Probable large radioactivity release initiated by LOCA with loss of ECCS and containment cooling  ALL MODES	<ul style="list-style-type: none"> <li>Loss of reactor coolant in progress</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>High or low head ECCS flow not being delivered to the core (if expected by plant conditions)</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Containment RS sump temperature greater than 190°F and NOT decreasing</li> </ul> <p><u>OR</u></p> <p>All Quench Spray and Recirculation Spray systems - NOT OPERABLE</p>	GENERAL EMERGENCY

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
6. Core damage with possible loss of coolable geometry  MODES 1, 2, 3, & 4	<p>a) Fuel clad failure as indicated by any of the following:</p> <ul style="list-style-type: none"> <li>RCS Specific activity greater than 60 <math>\mu\text{Ci}/\text{gram}</math> dose equivalent I-131</li> </ul> <p><u>OR</u></p> <p>High Range Letdown radiation monitor</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> 1-CH-RI-128 or  2-CH-RI-228  GREATER THAN  <math>1.2 \times 10^4</math> mR/hr </div> <p><u>AND</u></p> <p>b) Loss of cooling as indicated by any of the following:</p> <ul style="list-style-type: none"> <li>5 confirmed core exit thermocouples greater than 1200 °F</li> </ul> <p><u>OR</u></p> <p>Core delta T - zero</p> <p><u>OR</u></p> <p>Core delta T - rapidly diverging</p>	SITE AREA EMERGENCY

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
7. Major fuel damage accident with radioactivity release to containment or fuel buildings  ALL MODES	<ul style="list-style-type: none"> <li>Water level in Rx vessel during refueling below the top of core  <u>OR</u> Water level in spent fuel pool below top of spent fuel  <u>AND</u></li> <li>Verified damage to irradiated fuel resulting in readings on Vent Vent "B" Kaman monitor  <div>RM-VG-180 GREATER THAN <math>2.74 \times 10^8 \mu\text{Ci/sec}</math></div> <u>OR</u> HP determines Site Boundary DDE GREATER THAN 50 mrem/hr  <u>OR</u> Verified damage to irradiated fuel resulting in readings on Vent Vent "B" MGPI monitor  <div>RM-VG-180 GREATER THAN <math>2.69 \times 10^8 \mu\text{Ci/sec}</math></div></li> </ul>	SITE AREA EMERGENCY
8. Severe Fuel Clad Damage  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>High Range Letdown radiation monitor  <div>1-CH-RI-128 or 2-CH-RI-228 Increases to GREATER THAN Hi Hi Alarm setpoint within 30 minutes and remains for at least 15 minutes</div></li> </ul>	ALERT

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
9. Fuel damage accident with release of radioactivity to containment or fuel buildings ALL MODES	<ul style="list-style-type: none"> <li>Verified accident involving damage to irradiated fuel</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Health Physics confirms fission product release from fuel</li> </ul> <p><u>OR</u></p> <p>Vent Vent "B" Kaman monitor</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> RM-VG-180 GREATER THAN  <math>1.83 \times 10^6 \mu\text{Ci/sec}</math> </div> <p><u>OR</u></p> <p>HP assessment of sample results indicates GREATER THAN 10 times ODCM allowable limit (Alert per EAL E-3)</p> <p><u>OR</u></p> <p>Vent Vent "B" MGPI monitor</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> RM-VG-180 GREATER THAN  <math>1.99 \times 10^6 \mu\text{Ci/sec}</math> </div>	ALERT
10. Potential for fuel damage to occur during refueling MODE 6	Continuing uncontrolled decrease of water level in Reactor Refueling Cavity or Spent Fuel Pool	ALERT

NUMBER	ATTACHMENT TITLE	REVISION
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
11. Fuel clad damage indication MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Intentional reduction in power, load or temperature IAW reactor coolant activity T.S. Action Statement - HAS COMMENCED</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>High Range Letdown radiation monitor</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> 1-CH-RI-128 or  2-CH-RI-228  Increases to GREATER THAN Hi Alarm setpoint within 30 minutes and remains for at least 15 minutes </div>	NOTIFICATION OF UNUSUAL EVENT
12. Independent Spent Fuel Storage Installation (ISFSI) event ALL MODES	<ul style="list-style-type: none"> <li>Verified Sealed Surface Storage Cask (SSSC) seal leakage</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Sealed Surface Storage Cask (SSSC) dropped or mishandled</p>	NOTIFICATION OF UNUSUAL EVENT

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CONDITION/APPLICABILITY	INDICATION	CLASSIFICATION
1. Extremely high containment radiation, pressure and temperature  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Containment High Range radiation monitor <div> RM-RMS-165, -166 or  RM-RMS-265, -266  GREATER THAN  <math>3.76 \times 10^2</math> R/hr </div> </li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Containment pressure greater than 45 psia and not decreasing</li> </ul> <p><u>OR</u></p> <p>Containment temperature greater than 280°F</p>	GENERAL EMERGENCY
2. High-high containment radiation, pressure, and temperature  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Containment High Range radiation monitor <div> RM-RMS-165, -166 or  RM-RMS-265, -266  GREATER THAN  <math>1.88 \times 10^2</math> R/hr </div> </li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Containment pressure - greater than 27.75 psia and not decreasing</li> </ul> <p><u>OR</u></p> <p>Containment temperature - greater than 200 °F</p>	SITE AREA EMERGENCY

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3. High Containment radiation, pressure and temperature  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Containment High Range radiation monitor <div> RM-RMS-165, -166 or  RM-RMS-265, -266  GREATER THAN  81.5 R/hr </div> </li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Containment pressure - greater than 17 psia</li> </ul> <p><u>OR</u></p> <ul style="list-style-type: none"> <li>Containment temperature - greater than 1500F</li> </ul>	ALERT

NUMBER	ATTACHMENT TITLE	REVISION
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Release imminent or in progress and site boundary doses projected to exceed 1.0 Rem TEDE or 5.0 Rem Thyroid CDE  ALL MODES	<ul style="list-style-type: none"> <li>HP assessment indicates actual or projected doses at or beyond site boundary greater than 1.0 Rem TEDE or 5.0 Rem Thyroid CDE</li> </ul>	GENERAL EMERGENCY
2. Release imminent or in progress and site boundary doses projected to exceed 0.1 Rem TEDE or 0.5 Rem Thyroid CDE  ALL MODES	<ul style="list-style-type: none"> <li>HP assessment indicates actual or projected dose at or beyond Site Boundary exceeds 0.1 Rem TEDE or 0.5 Rem Thyroid CDE</li> </ul>	SITE AREA EMERGENCY

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EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB E) RADIOACTIVITY EVENT	34
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3. Effluent release greater than 10 times ODCM allowable limit  ALL MODES	<p>a) Any of the following monitors indicate valid readings above the specified values for greater than 15 minutes</p> <ul style="list-style-type: none"> <li>Clarifier Effluent RM-LW-111 GREATER THAN <math>4.8 \times 10^5</math> cpm</li> <li>Discharge Canal RM-SW-130 or -230 GREATER THAN <math>5 \times 10^4</math> cpm</li> <li>Vent Vent A Kaman RM-VG-179 GREATER THAN <math>1.83 \times 10^6</math> <math>\mu\text{Ci/sec}</math></li> <li>Vent Vent A MGPI RM-VG-179 GREATER THAN <math>1.73 \times 10^6</math> <math>\mu\text{Ci/sec}</math></li> <li>Vent Vent B Kaman RM-VG-180 GREATER THAN <math>1.83 \times 10^6</math> <math>\mu\text{Ci/sec}</math></li> <li>Vent Vent B MGPI RM-VG-180 GREATER THAN <math>1.99 \times 10^6</math> <math>\mu\text{Ci/sec}</math></li> <li>Process Vent Kaman RM-GW-178 GREATER THAN <math>2.0 \times 10^7</math> <math>\mu\text{Ci/sec}</math></li> <li>Process Vent MGPI RM-GW-178 GREATER THAN <math>1.35 \times 10^7</math> <math>\mu\text{Ci/sec}</math></li> </ul> <p>OR</p> <p>b) HP assessment (sample results or dose projections) indicate greater than 10 times ODCM allowable limit</p>	ALERT

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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>4. High radiation or airborne contamination levels indicate a severe degradation in control of radioactive material</p> <p>ALL MODES</p>	<p>Valid readings on any of the following monitors have increased by a factor of 1000 and remain for at least 15 minutes:</p> <ul style="list-style-type: none"> <li>• Ventilation Vent Multi-sample gaseous or particulate monitor RM-VG-106 or -105</li> <li>• Control Room Area RMS-157</li> <li>• Aux. Bldg. Control Area RMS-154</li> <li>• Decon. Bldg. Area RMS-151</li> <li>• Fuel Pool Bridge Area RMS-153</li> <li>• New fuel storage Area RMS-152</li> <li>• Laboratory Area RMS-158</li> <li>• Sample Room Area RMS-156</li> </ul>	<p>ALERT</p>

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CONDITION/APPLICABILITY

5. Effluent release  
greater than ODCM  
allowable limit  
  
ALL MODES

INDICATION

a) Any of the following  
monitors indicate valid  
readings above the  
specified value for more  
than 1 hour:

CLASSIFICATION

NOTIFICATION  
OF UNUSUAL  
EVENT

- Clarifier Effluent

RM-LW-111 GREATER THAN  $4.8 \times 10^4$  cpm

- Discharge Canal

RM-SW-130 or -230 GREATER THAN  $5 \times 10^3$  cpm

- Vent Vent A Kaman

RM-VG-179 GREATER THAN  $1.83 \times 10^5$   $\mu\text{Ci/sec}$

- Vent Vent A MGPI

RM-VG-179 GREATER THAN  $1.73 \times 10^5$   $\mu\text{Ci/sec}$

- Vent Vent B Kaman

RM-VG-180 GREATER THAN  $1.83 \times 10^5$   $\mu\text{Ci/sec}$

- Vent Vent B MGPI

RM-VG-180 GREATER THAN  $1.99 \times 10^5$   $\mu\text{Ci/sec}$

- Process Vent Kaman

RM-GW-178 GREATER THAN  $2.0 \times 10^6$   $\mu\text{Ci/sec}$

- Process Vent MGPI

RM-GW-178 GREATER THAN  $1.35 \times 10^6$   $\mu\text{Ci/sec}$

OR

- b) HP assessment (sample  
results or dose  
projections) indicates  
greater than ODCM  
allowable limit

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB G) LOSS OF SECONDARY COOLANT	34
ATTACHMENT		PAGE
1		28 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
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1. Major secondary line break with significant primary to secondary leakage and fuel damage indicated	Conditions a) and b) exist with c): a) Uncontrolled loss of secondary coolant - IN PROGRESS <u>AND</u>	SITE AREA EMERGENCY
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MODES 1, 2, 3, & 4	b) RCS specific activity exceeds limits of T.S. Figure 3.4-1 (See Attachment 2) <u>OR</u>	
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High Range Letdown radiation monitor

1-CH-RI-128 or 2-CH-RI-228  
GREATER THAN Hi Alarm setpoint

AND

c) Vent Vent A Kaman Monitor

RM-VG-179 GREATER THAN  $6.45 \times 10^7$   $\mu$ Ci/sec

OR

HP determines Site Boundary DDE GREATER THAN 50 mrem/hr

OR

Vent Vent A MGPI Monitor

RM-VG-179 GREATER THAN  $6.21 \times 10^7$   $\mu$ Ci/sec

OR

Affected pathway Steam Generator Blowdown monitor

RM-SS-122, -123, -124, -222, -223, -224  
GREATER THAN  $1 \times 10^6$  cpm

OR

Affected pathway Main Steam Line High Range monitor

RM-MS-170, -171, -172, -270, -271, -272  
GREATER THAN 12.2 mR/hr

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB G) LOSS OF SECONDARY COOLANT	34
ATTACHMENT		PAGE
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
2. Major secondary line break with significant primary to secondary leakage  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Uncontrolled loss of secondary coolant - IN PROGRESS</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Vent Vent A Kaman Monitor</li> </ul> <div>RM-VG-179 GREATER THAN 1.83 x 10<sup>6</sup> µCi/sec</div> <p><u>OR</u></p> <p>HP assessment of sample results indicates GREATER THAN 10 times ODCM allowable limit (Alert per EAL E-3)</p> <p><u>OR</u></p> <p>Vent Vent A MGPI Monitor</p> <div>RM-VG-179 GREATER THAN 1.76 x 10<sup>6</sup> µCi/sec</div> <p><u>OR</u></p> <p>Steam Generator Blowdown monitor on affected pathway</p> <div>RM-SS-122, -123, -124 RM-SS-222, -223, -224 GREATER THAN 1x10<sup>5</sup> cpm</div> <p><u>OR</u></p> <p>Main Steam Line High Range monitor on affected pathway</p> <div>RM-MS-170, -171, -172 RM-MS-270, -271, -272 GREATER THAN 0.14 mR/hr</div>	ALERT
3. Major secondary line break  MODES 1, 2, 3, & 4	Uncontrolled loss of secondary coolant - IN PROGRESS	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB H) ELECTRICAL FAILURE	34
ATTACHMENT		PAGE
1		30 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Loss of offsite and onsite AC power for more than 15 minutes  ALL MODES	<p>The following conditions exist for greater than 15 minutes:</p> <ul style="list-style-type: none"> <li>Ammeters for 4160V Reserve Station Service Buses D, E, &amp; F all indicate - zero (0) amps</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Ammeters for 4160V Station Service Buses A, B, &amp; C all indicate - zero (0) amps</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Ammeters for 4160V Emergency Buses H &amp; J both indicate - zero (0) amps</li> </ul>	SITE AREA EMERGENCY
2. Loss of all onsite DC power for greater than 15 minutes  ALL MODES	<p>The following conditions exist for greater than 15 minutes:</p> <ul style="list-style-type: none"> <li>All station battery voltmeters indicate zero (0) volts</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>No light indication available to Reserve Station Service breakers 15D1, 15E1 and 15F1</li> </ul>	SITE AREA EMERGENCY

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB H) ELECTRICAL FAILURE	34
ATTACHMENT		PAGE
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>CAUTION: EAL A.1 is duplicated below for cross-reference/comparison to EAL H.3:</p>		
<p>A.1. Loss of function needed for unit HSD condition</p> <p>MODES 1, 2, 3 &amp; 4</p>	<ul style="list-style-type: none"> <li>Total loss of the Charging/SI System</li> </ul> <p><u>OR</u></p> <ul style="list-style-type: none"> <li>Total loss of the Main Feedwater and Auxiliary Feedwater Systems</li> </ul>	<p>SITE AREA EMERGENCY</p>
<p>3. Loss of all offsite and onsite AC power</p> <p>ALL MODES</p>	<ul style="list-style-type: none"> <li>Ammeters for 4160V Reserve Station Service Buses D, E, &amp; F all indicate - zero (0) amps</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Ammeters for 4160V Station Service Buses A, B, &amp; C all indicate - zero (0) amps</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>Ammeters for 4160V Emergency Buses H and J both indicate - zero (0) amps</li> </ul>	<p>ALERT</p>
<p>4. Loss of all onsite DC power</p> <p>ALL MODES</p>	<ul style="list-style-type: none"> <li>All station battery voltmeters indicate - zero (0) volts</li> </ul> <p><u>AND</u></p> <ul style="list-style-type: none"> <li>No light indication available to Reserve Station Service Breakers 15D1, 15E1 and 15F1</li> </ul>	<p>ALERT</p>

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB H) ELECTRICAL FAILURE	34
ATTACHMENT		PAGE
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
5. Loss of offsite power or onsite AC power capability	<ul style="list-style-type: none"> <li>Unit main generator and both emergency diesel generators out of service</li> </ul>	NOTIFICATION OF UNUSUAL EVENT
ALL MODES	<p><u>OR</u></p> <p>Loss of all 34.5 KV reserve station service buses</p>	

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB I) FIRE	34
ATTACHMENT		PAGE
1		33 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Fire resulting in degradation of safety systems  MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Fire which causes major degradation of a safety system function required for protection of the public</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>Affected systems are caused to be <u>NOT</u> operable as defined by Tech. Specs.</li> </ul>	SITE AREA EMERGENCY
2. Fire potentially affecting station safety systems  MODES 1, 2, 3, & 4	Fire which has potential for causing a safety system not to be operable as defined by Tech. Specs.	ALERT
3. Fire lasting greater than 10 minutes in Protected Area or Service Water Pump/Valve House  ALL MODES	Fire within the Protected Area or Service Water Pump/Valve House which is not under control within 10 minutes after Fire Brigade - DISPATCHED	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB J) SECURITY EVENT	34
ATTACHMENT		PAGE
1		34 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Loss of physical Station control  ALL MODES	<ul style="list-style-type: none"> <li>Shift Supervisor has been informed that the security force has been neutralized by attack, resulting in loss of physical control of station</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Shift Supervisor has been informed of intrusion into one or more Vital Areas which are occupied or controlled by an aggressor</p>	GENERAL EMERGENCY
2. Imminent loss of physical Station control  ALL MODES	Security Shift Supervisor has notified the Operations Shift Supervisor of imminent intrusion into a Vital Area	SITE AREA EMERGENCY
3. Ongoing Security compromise  ALL MODES	Security Shift Supervisor has notified the Operations Shift Supervisor of a confirmed unneutralized intrusion into the Protected Area	ALERT
4. Security threat, unauthorized attempted entry, or attempted sabotage  ALL MODES	Security Shift Supervisor has recommended that the Operations Shift Supervisor declare a Notification of Unusual Event IAW applicable Security Contingency Plan Implementing Procedures	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB K) HAZARD TO STATION OPERATION	34
ATTACHMENT		PAGE
1		35 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Aircraft damage to vital plant systems MODES 1, 2, 3, & 4	Aircraft crash which affects vital structures by impact or fire	SITE AREA EMERGENCY
2. Severe explosive damage MODES 1, 2, 3, & 4	Explosion which results in severe degradation of any of the following systems required for safe shutdown: <ul style="list-style-type: none"> <li>CVCS System</li> <li><u>OR</u></li> <li>ECCS System</li> <li><u>OR</u></li> <li>Main/Auxiliary Feedwater System</li> </ul>	SITE AREA EMERGENCY
3. Entry of toxic or flammable gases into plant vital areas other than the Control Room MODES 1, 2, 3, & 4	<ul style="list-style-type: none"> <li>Uncontrolled release of toxic or flammable agents greater than life threatening or explosive limits in Vital Areas</li> <li><u>AND</u></li> <li>Evacuation of Vital Area other than Control Room - REQUIRED</li> <li><u>OR</u></li> <li>Significant degradation of plant safety systems resulting in loss of a safety system function required for protection of the public</li> </ul>	SITE AREA EMERGENCY

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB K) HAZARD TO STATION OPERATION	34
ATTACHMENT		PAGE
1		36 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
4. Severe missile damage to safety systems  MODES 1, 2, 3, & 4	Missile impact causing severe degradation of safety systems required for unit shutdown	SITE AREA EMERGENCY
5. Aircraft crash on the facility  ALL MODES	Aircraft crash within the Protected Area or Switchyard	ALERT
6. Explosion damage to facility  ALL MODES	Unplanned explosion resulting in damage to plant structure or equipment that affects plant operations	ALERT
7. Entry of toxic or flammable gases or liquids into plant facility  ALL MODES	Notification of uncontrolled release of toxic or flammable agent which causes: <ul style="list-style-type: none"> <li>• Evacuation of personnel from plant areas</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>• Safety related equipment is rendered inoperable</li> </ul>	ALERT
8. Turbine failure or missile impact  MODES 1 & 2	Failure of turbine/generator rotating equipment resulting in casing penetration	ALERT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB K) HAZARD TO STATION OPERATION	34
ATTACHMENT		PAGE
1		37 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
9. Missile damage to safety related equipment or structures  MODES 1, 2, 3, & 4	Notification of missile impact causing damage to safety related equipment or structures	ALERT
10. Aircraft crash or unusual aircraft activity  ALL MODES	<ul style="list-style-type: none"> <li>Confirmed notification of aircraft crash within the site boundary</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Unusual aircraft activity in the vicinity of the site as determined by the Operations Shift Supervisor or the Security Shift Supervisor</p>	NOTIFICATION OF UNUSUAL EVENT
11. Train derailment within Protected Area  ALL MODES	Confirmed report of train derailment within Protected Area	NOTIFICATION OF UNUSUAL EVENT
12. Explosion within Protected Area  ALL MODES	Confirmed report of unplanned explosion within Protected Area	NOTIFICATION OF UNUSUAL EVENT
13. Onsite or nearsite release of toxic or flammable liquids or gases  ALL MODES	Notification of unplanned release of toxic or flammable agents which may affect safety of station personnel or equipment	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB K) HAZARD TO STATION OPERATION	34
ATTACHMENT		PAGE
1		38 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
14. Turbine rotating component failure with no casing penetration  MODES 1 & 2	Failure of turbine/generator rotating equipment resulting in immediate unit shutdown	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB L) NATURAL EVENTS	34
ATTACHMENT		PAGE
1		39 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Earthquake greater than or equal to DBE levels  ALL MODES	<ul style="list-style-type: none"> <li>Confirmed earthquake which activates the Event Alarm on the Strong Motion Accelerograph</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>Alarms on the Peak Shock Annunciator indicate a horizontal motion of greater than or equal to 0.12 g or a vertical motion of greater than or equal to 0.08g</li> </ul>	SITE AREA EMERGENCY
2. Sustained winds in excess of design levels experienced or projected  MODES 1, 2, 3, & 4	Sustained winds 150 mph OR GREATER experienced or projected	SITE AREA EMERGENCY
3. Flood or low water level above design levels  MODES 1, 2, 3, & 4	<p>Either condition a) or b) exists</p> <p>a) Flood in the Lake Anna Reservoir with indicated level - greater than 264 feet MSL</p> <p style="text-align: center;"><u>OR</u></p> <p>b) Low water level in the Lake Anna Reservoir with indicated level - less than 244 feet MSL</p> <p style="text-align: center;"><u>AND</u></p> <p>Inability to satisfy action requirements of T.S. 3.7.5.1 for Ultimate Heat Sink</p>	SITE AREA EMERGENCY

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB L) NATURAL EVENTS	34
ATTACHMENT		PAGE
1		40 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
4. Earthquake greater than or equal to OBE levels  ALL MODES	<ul style="list-style-type: none"> <li>Confirmed earthquake which activates Event Alarm on the Strong Motion Accelerograph</li> </ul> <p style="text-align: center;"><u>AND</u></p> <ul style="list-style-type: none"> <li>Alarms on the Peak Shock Annunciator indicate a horizontal motion of greater than or equal to 0.06 g or a vertical motion of greater than or equal to 0.04g</li> </ul>	ALERT
5. Tornado striking facility  ALL MODES	Tornado visually detected striking structures within the Protected Area or Switchyard	ALERT
6. Hurricane winds near design basis level experienced or projected  ALL MODES	Hurricane winds 120 mph OR GREATER experienced or projected	ALERT
7. Flood or low water level near design levels  ALL MODES	<ul style="list-style-type: none"> <li>Flood in the Lake Anna Reservoir with indicated level - greater than 263 feet MSL</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Low water level in the Lake Anna Reservoir with indicated level - less than 244 feet MSL</p>	ALERT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE (TAB L) NATURAL EVENTS	34
ATTACHMENT 1		PAGE 41 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
8. Earthquake detected ALL MODES	Confirmed earthquake which activates the Event Alarm on the Strong Motion Accelerograph	NOTIFICATION OF UNUSUAL EVENT
9. Tornado within Protected Area or Switchyard ALL MODES	Tornado visually detected within Protected Area or Switchyard	NOTIFICATION OF UNUSUAL EVENT
10. Hurricane force winds projected onsite within 12 hours ALL MODES	<ul style="list-style-type: none"> <li>Confirmation by Virginia Power Weather Center that hurricane force winds (greater than 73 mph) projected onsite within 12 hours</li> </ul>	NOTIFICATION OF UNUSUAL EVENT
11. 50 year flood or low water level ALL MODES	<ul style="list-style-type: none"> <li>Flood in the Lake Anna Reservoir with indicated level - greater than 254 feet MSL</li> </ul> <p style="text-align: center;"><u>OR</u></p> <p>Low water level in the Lake Anna Reservoir with indicated level less than 246 feet MSL</p>	NOTIFICATION OF UNUSUAL EVENT

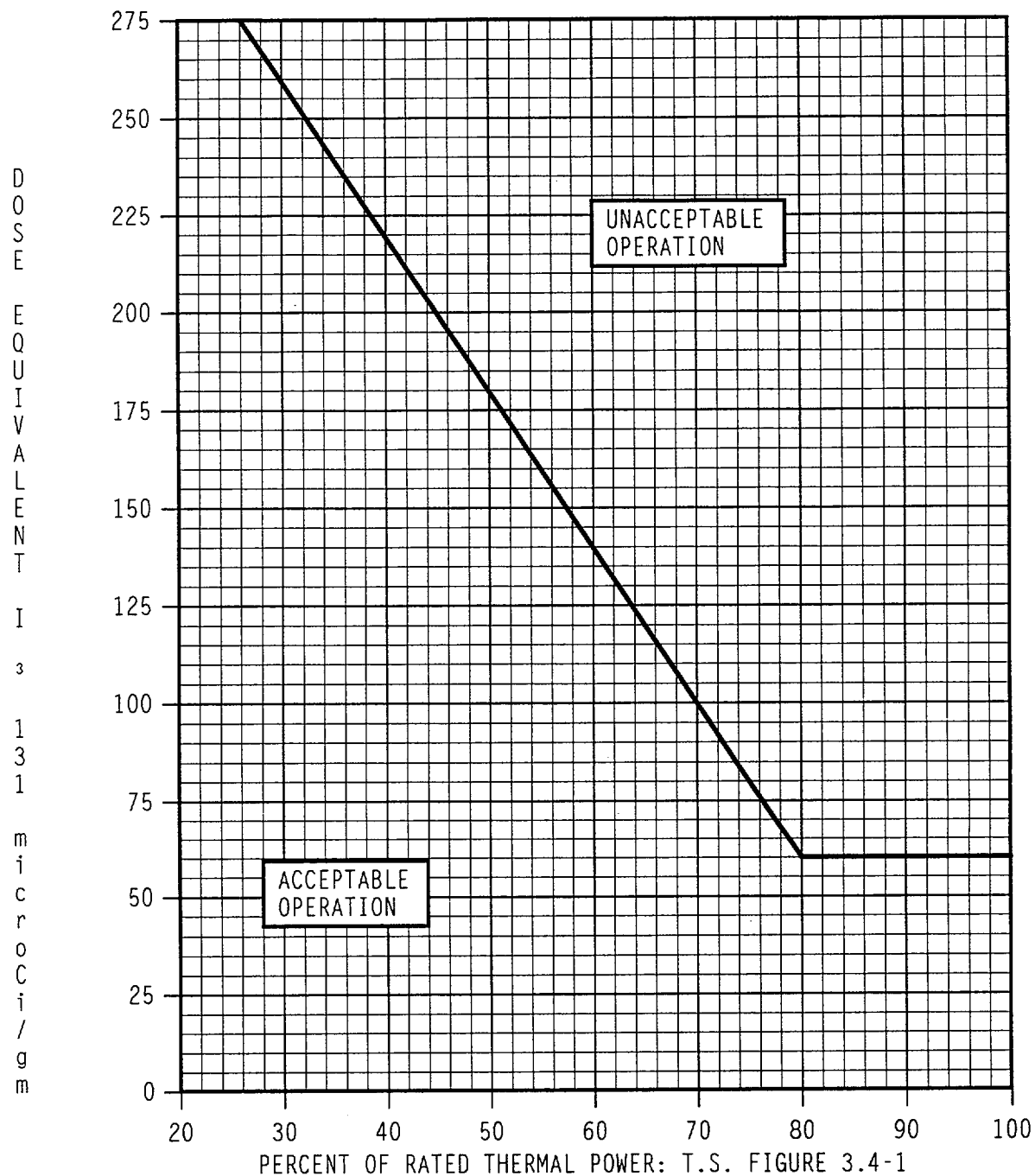
NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE	34
ATTACHMENT	(TAB M)	PAGE
1	MISCELLANEOUS ABNORMAL EVENTS	42 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Any major internal or external events which singly or in combination cause massive damage to station facilities or may warrant evacuation of the public  ALL MODES	Shift Supervisor/Station Emergency Manager judgement	GENERAL EMERGENCY
2. Station conditions which may warrant notification of the public near the site  ALL MODES	Shift Supervisor/Station Emergency Manager judgement	SITE AREA EMERGENCY
3. Station conditions which have the potential to degrade or are actually degrading the level of safety of the station  ALL MODES	Shift Supervisor/Station Emergency Manager judgement	ALERT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	EMERGENCY ACTION LEVEL TABLE	34
ATTACHMENT	(TAB M)	PAGE
1	MISCELLANEOUS ABNORMAL EVENTS	43 of 43

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
4. Station conditions which warrant increased awareness of state and/or local authorities  ALL MODES	Shift Supervisor judgement that any of the following exist:  <ul style="list-style-type: none"> <li>Unit shutdown is other than a controlled shutdown</li> </ul> <p style="text-align: center;"><u>OR</u></p> Unit is in an uncontrolled condition during operation  <p style="text-align: center;"><u>OR</u></p> A condition exists which has the potential for escalation and therefore warrants notification	NOTIFICATION OF UNUSUAL EVENT

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	TECH SPEC FIGURE 3.4-1	34
ATTACHMENT		PAGE
2		1 of 1



DOSE EQUIVALENT I-131 PRIMARY COOLANT SPECIFIC ACTIVITY LIMIT Versus  
Percent of RATED THERMAL POWER with the Primary Coolant Specific  
Activity > 1.0  $\mu\text{Ci/gm}$  Dose Equivalent I-131

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	TURNOVER CHECKLIST	34
ATTACHMENT		PAGE
3		1 of 1

Conduct a turnover between the onshift and relief SEM in accordance with the following checklist. Use placekeeping aid at left of item, "\_\_\_\_", to track completion.

- \_\_\_\_ 1. Determine the status of primary responder notification.
- \_\_\_\_ 2. Determine the status of "Report of Emergency to State and Local Governments," EPIP-2.01, Attachment 2. Get completed copies if available.
- \_\_\_\_ 3. Determine status of the "Report of Radiological Conditions to the State," EPIP-2.01, Attachment 3. Get completed copy if available.
- \_\_\_\_ 4. Determine status of Emergency Notification System (ENS) communications and completion status of NRC Event Notification Worksheet (EPIP-2.02 Attachment 1).
- \_\_\_\_ 5. Review classification and initial PAR status.
- \_\_\_\_ 6. Review present plant conditions and status. Get copy of Critical Safety Functions form.
- \_\_\_\_ 7. Review status of station firewatches and re-establish if conditions allow.
- \_\_\_\_ 8. Determine readiness of TSC for activation.
- \_\_\_\_ 9. After all information is obtained, transfer location to TSC. (Consider direct transfer of State & local notifications to LEOF/CEOF.)
- \_\_\_\_ 10. Call the Control Room and assess any changes that may have occurred during transition to the TSC.
- \_\_\_\_ 11. When sufficient personnel are available, the relief SEM is to assume the following responsibilities from the onshift Station Emergency Manager:
  - a. Reclassification.
  - b. Protective Action Recommendations until LEOF activated.
  - c. Notifications (i.e., state, local, & NRC). Upon LEOF activation, transfer notification responsibilities except for the NRC ENS.
  - d. Site evacuation authorization.
  - e. Emergency exposure authorization.
  - f. Command/control of onsite response.
- \_\_\_\_ 12. Formally relieve the Interim SEM and assume control in the TSC. Announce name and facility activation status to facility.

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.01	CONSIDERATIONS FOR OPERATIONS RESPONSE UNDER ABNORMAL CONDITIONS	34
ATTACHMENT		PAGE
4		1 of 1

This attachment provides procedural guidance for controlling selected emergency response actions when their implementation would have adverse results.

Station Emergency Manager (SEM) approval is required before any required action is postponed, suspended or modified. The guidance below is not all-inclusive.

SECURITY EVENT RESPONSE:

IF implementation of emergency response facility activation or assembly of personnel for accountability could compromise Security Plan response strategies or create a personnel safety hazard due to movement of personnel, THEN consider postponing or suspending emergency response actions until threat has been resolved.

UNANTICIPATED HAZARDOUS CONDITIONS EXIST (e.g., tornado or toxic release):

IF assembling personnel for accountability or activating emergency response facilities could endanger plant personnel, THEN consider postponing emergency assembly. (Consider implementing alternative notification methods on an ad hoc basis, e.g., selectively notify personnel in unaffected areas or defer notifications until hazardous conditions are resolved.)

IF notifying augmentation could create a safety hazard for personnel coming to the station, THEN consider postponing augmentation notification. (Consider implementing alternative notification methods on an ad hoc basis, e.g., selectively notify personnel reporting to unaffected areas or defer notifications until the hazardous condition is resolved.)

ANTICIPATED SITUATION (e.g., forecasted severe weather or grid disturbance):

IF all or part of the ERO has been staged in anticipation of a predicted event, THEN notify Security to omit performance of augmentation notification (as described in EPIP-3.05, AUGMENTATION OF EMERGENCY RESPONSE ORGANIZATION).

IF adequate controls have been established to continually account for personnel staged in anticipation of a predicted event, THEN notify Security to omit performance of initial accountability (as described in EPIP-5.03, PERSONNEL ACCOUNTABILITY).

IF a decision has been made to staff the Central EOF in lieu of the LEOF, THEN notify Security that performance of EPIP-3.04, ACTIVATION OF LOCAL EMERGENCY OPERATIONS FACILITY, is not required.

IF environmental conditions are hazardous, THEN consult with Security Team Leader about suspending procedural requirements for staging road blocks (IAW EPIP-5.04, ACCESS CONTROL).

VIRGINIA POWER  
NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-1.06	PROCEDURE TITLE PROTECTIVE ACTION RECOMMENDATIONS  (With 3 Attachments)	REVISION 4
		PAGE 1 of 3

**PURPOSE**

Give guidance to the Station Emergency Manager or Recovery Manager regarding determination of Protective Action Recommendations.

**LEVEL 2 DISTRIBUTION**  
**This Document Should Be Verified**  
**And Annotated To A Controlled Source**  
**As Required to Perform Work**

**ENTRY CONDITIONS**

Any of the following:

1. Activation by EPIP-1.05, RESPONSE TO GENERAL EMERGENCY.
2. Activation by CPIP-1.0, CORPORATE RESPONSE MANAGER ACTIVATION.
3. Activation by CPIP-6.0, LEOF RECOVERY MANAGER GUIDANCE.
4. As directed by the Station Emergency Manager or Recovery Manager.

Approvals on File

Effective Date

9/5/01

<b>NUMBER</b> EPIP-1.06	<b>PROCEDURE TITLE</b> PROTECTIVE ACTION RECOMMENDATIONS	<b>REVISION</b> 4 <hr/> <b>PAGE</b> 2 of 3
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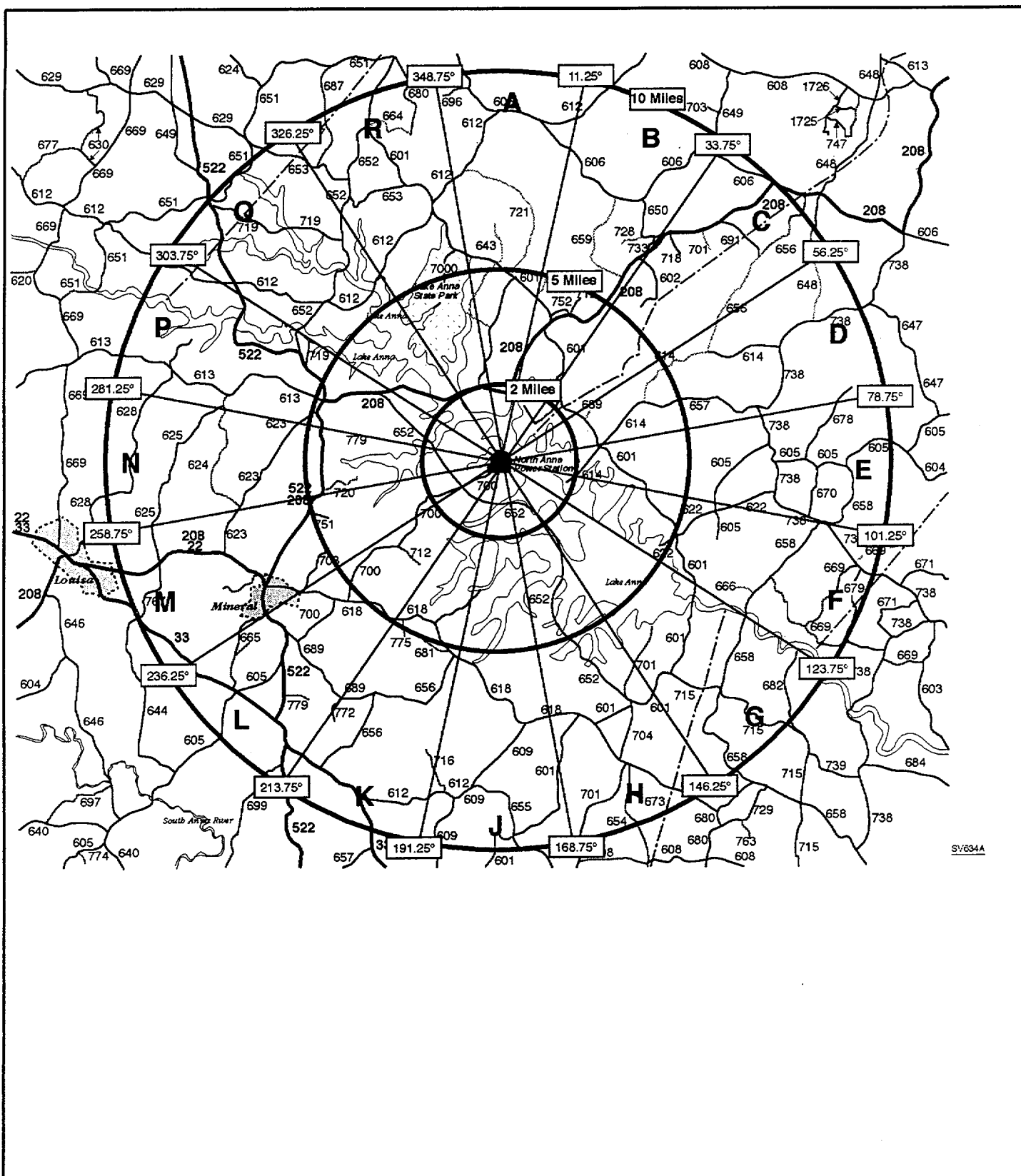
STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>_____ 1 INITIATE PROCEDURE:</p> <ul style="list-style-type: none"> <li>• By: _____</li> <li>Date: _____</li> <li>Time: _____</li> </ul> <p><b>NOTE:</b> The initial notification of General Emergency and an applicable Protective Action Recommendation (PAR) must be made to the State within 15 minutes following declaration of the General Emergency.</p>		
<p>_____ 2 USE ATTACHMENT 2, PROTECTIVE ACTION RECOMMENDATION MATRIX, TO DETERMINE INITIAL PAR</p>		
<p>_____ 3 COMPLETE ATTACHMENT 3, PROTECTIVE ACTION RECOMMENDATION FORM:</p> <ul style="list-style-type: none"> <li>a) Fill in Item 1 (Meteorological Data)</li> <li>b) Mark appropriate PAR box of Item 2</li> <li>c) Sign and date form</li> </ul>		
<p>_____ 4 DIRECT EMERGENCY COMMUNICATORS TO NOTIFY OFFSITE AUTHORITIES OF PAR:</p> <ul style="list-style-type: none"> <li>• State Emergency Operations Center notified IAW EPIP-2.01, NOTIFICATION OF STATE AND LOCAL GOVERNMENTS</li> <li>• NRC notified IAW EPIP-2.02, NOTIFICATION OF NRC (notifications made from Control Room or TSC, when activated)</li> </ul>		

<b>NUMBER</b> EPIP-1.06	<b>PROCEDURE TITLE</b> PROTECTIVE ACTION RECOMMENDATIONS	<b>REVISION</b> 4 <b>PAGE</b> 3 of 3
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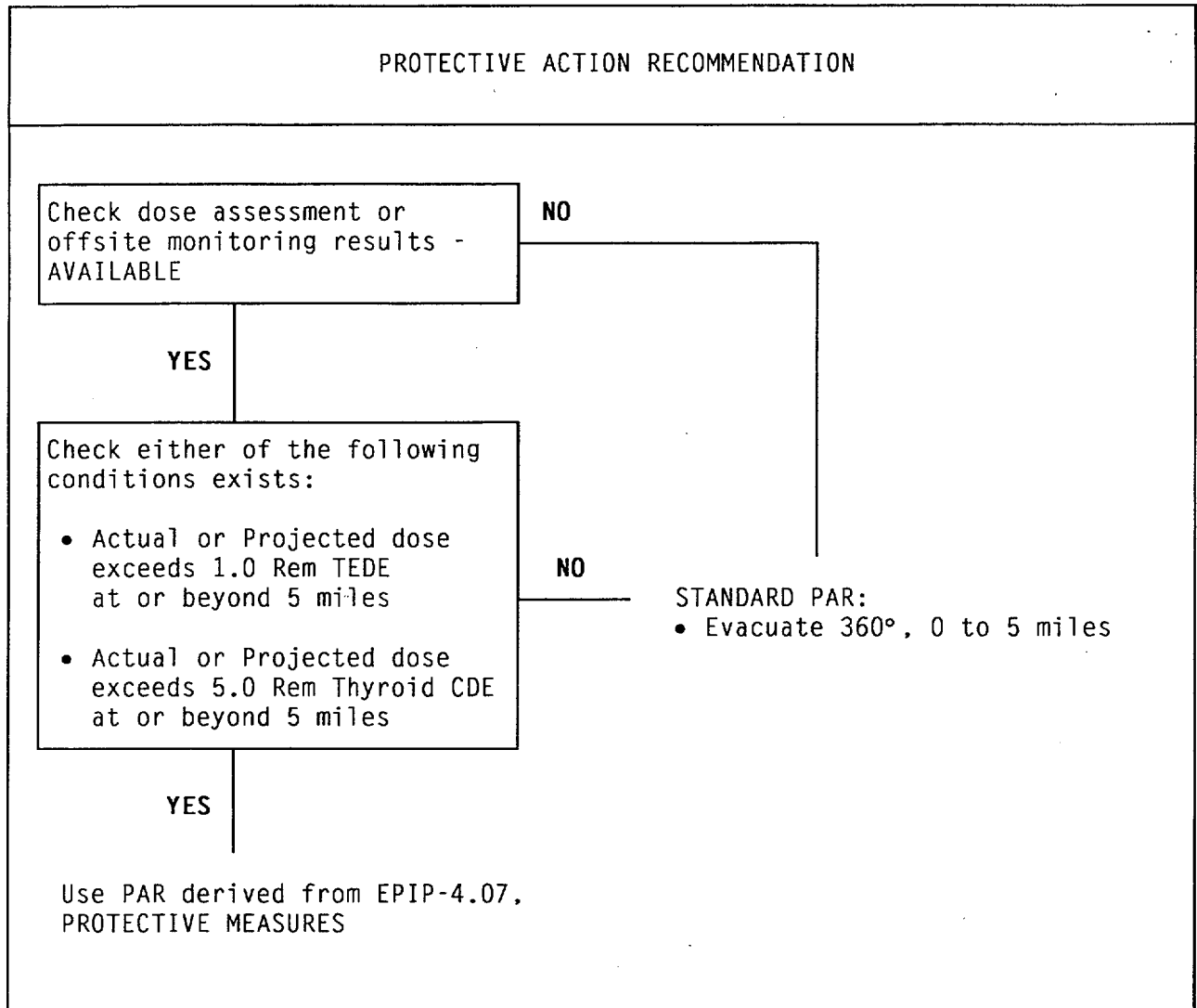
STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 5	HAVE RADIOLOGICAL ASSESSMENT DIRECTOR (RAD) IMPLEMENT EPIP-4.07, PROTECTIVE MEASURES [RADIOLOGICAL ASSESSMENT COORDINATOR (RAC) IF IN LEOF]	
_____ 6	CHECK IF RADIOLOGICAL-BASED PAR RECOMMENDS PROTECTIVE ACTIONS IN ANY NEW AREA(s)	<u>IF</u> PAR in effect - UNCHANGED, <u>THEN</u> GO TO Step 8.
_____ 7	RETURN TO STEP 3	
_____ 8	CHECK EMERGENCY - TERMINATED	<u>IF</u> RAD/RAC recommends a PAR change, <u>THEN</u> RETURN TO Step 6.
_____ 9	TERMINATE EPIP-1.06:  <ul style="list-style-type: none"> <li>• Give completed EPIP-1.06, forms, and other applicable records to TSC Emergency Procedures Coordinator or LEOF Services Coordinator</li> <li>• Completed by: _____</li> <li>Date: _____</li> <li>Time: _____</li> </ul>	

-END-

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.06	SECTOR MAP	4
ATTACHMENT		PAGE
1		1 of 1



<b>NUMBER</b>	<b>ATTACHMENT TITLE</b>  PROTECTIVE ACTION RECOMMENDATION MATRIX  (NAPS)	<b>REVISION</b>
EPIP-1.06		4
<b>ATTACHMENT</b>		<b>PAGE</b>
2		1 of 1



NUMBER	ATTACHMENT TITLE	REVISION
EPIP-1.06	PROTECTIVE ACTION RECOMMENDATION FORM	4
ATTACHMENT		PAGE
3		1 of 1

- NOTE:**
- Downwind sectors (primary plus 2 buffer sectors) may be determined from the State/Local Emergency Communicator, facility maps, or Attachment 1, Sector Map.
  - Wind direction is always given as the compass point the wind blows from, which is opposite from the primary downwind sector. Example: Wind direction from East North East (ENE) means Sector M is primary.
  - Recommendations for sheltering may be made at the discretion of the Station Emergency Manager / Recovery Manager.

1. METEOROLOGICAL DATA:

WIND SPEED: \_\_\_\_\_ mph

DOWNWIND SECTORS: \_\_\_\_\_

2. PROTECTIVE ACTION RECOMMENDATION:

☐ STANDARD PAR:

Evacuate 360° from 0 to 5 miles.

☐ EXPANDED PAR:

☐ Evacuate 360° from 0 to 5 miles.

☐ Evacuate 360° from 5 to \_\_\_\_\_ miles.

☐ Evacuate sectors \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ miles.

☐ Shelter 360° from \_\_\_\_\_ to \_\_\_\_\_ miles.

☐ Shelter sectors \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ miles.

☐ Shelter unaffected sectors from \_\_\_\_\_ to \_\_\_\_\_ miles.

APPROVED BY:

\_\_\_\_\_  
Station Emergency Manager or  
Recovery Manager

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

VIRGINIA POWER  
NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS  (With 3 Attachments)	REVISION 24
		PAGE 1 of 17

**PURPOSE**

To initially notify State and local governments of the declaration of an emergency and to provide status updates related to the event.

**LEVEL 2 DISTRIBUTION**  
This Document Should Be Verified  
And Annotated To A Controlled Source  
As Required to Perform Work

**ENTRY CONDITIONS**

Any of the following:

1. An emergency has been declared.
2. Entry directed by Station Emergency Manager.

Approvals on File

Effective Date 9/26/2001

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	24
		PAGE 2 of 17

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>____ 1 INITIATE PROCEDURE:</p> <ul style="list-style-type: none"> <li>• By: _____</li> <li>Date: _____</li> <li>Time: _____</li> <li>Location: _____</li> </ul>		
<p>____ 2 CHECK FIRST REPORT OF EMERGENCY FOR EVENT - REQUIRED</p>	<p><u>IF</u> procedure previously initiated, <u>THEN</u> continue from step in effect identified during relief/turnover.</p>	
<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• The initial notification of any emergency classification must be completed within 15 minutes of declaring the emergency class.</li> <li>• Items 4 through 8 on Attachment 2 may be excluded from the first report of any emergency classification (including termination).</li> <li>• Attachment 1, Instructions for Completing Report of Emergency to State and Local Governments, may be referenced as needed.</li> </ul>		
<p>____ 3 RECORD INFORMATION ON ATTACHMENT 2 (REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS)</p>		
<p>____ 4 CHECK EMERGENCY - REMAINS IN EFFECT</p>	<p><u>IF</u> emergency terminated before message sent, <u>THEN</u> do the following:</p> <ul style="list-style-type: none"> <li>a) Record reason event terminated in Item 3.</li> <li>b) Record "State EOC-only portion of message not applicable" on bottom of Attachment 2 Page 2.</li> </ul>	
<p>____ 5 HAVE SEM/RM APPROVE REPORT (initial at top of Attachment 2)</p>		

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	24
		PAGE 3 of 17

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6	RECORD TIME NOTIFICATION STARTED	
	<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>Multiple items excluded from a message may be read as a single statement, e.g., "Items 4 through 8 excluded from this message."</li> <li>Outbound calls through the PBX system are made by dialing 8-1-(area code)-###-####. Direct outbound calls may be made using unrestricted telephones by dialing 9-1-(area code)-###-#### (area code not required for direct outbound calls within local calling area). No prefix is required when using a commercial telephone.</li> </ul>	
7	SEND REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS:	
	a) Check Instaphone - CLEAR OF CONFLICTING MESSAGE TRAFFIC	<p>a) <u>IF</u> Instaphone <u>NOT</u> available, <u>THEN</u> do the following:</p> <ol style="list-style-type: none"> <li>1) Call State EOC on DEM ARD (Alternate: (804) 674-2400).</li> <li>2) Notify State EOC Duty Officer of need to transmit message.</li> <li>3) <u>WHEN</u> Instaphone available for message transmittal, <u>THEN</u> GO TO Step 7.b.</li> </ol>
	b) Use Instaphone to contact State and local Emergency Operations Centers (EOCs)	b) <u>IF</u> Instaphone <u>NOT</u> operable, <u>THEN</u> GO TO Step 11.
	c) Perform initial roll-call (check boxes as EOC(s) answer or circle if no response)	
	d) Read Items 1 through 9	
	e) Perform acknowledgement roll-call (check boxes as EOC(s) answer or circle if no response)	
	(STEP 7 CONTINUED ON NEXT PAGE)	

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	24
		PAGE 4 of 17

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7	SEND REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS: (Continued)	
	f) Repeat any items upon request	
	g) Record date and time transmittal of Items 1 through 9 completed	
	h) Check message reports emergency - REMAINS IN EFFECT	h) <u>IF</u> State EOC acknowledged message, <u>THEN</u> GO TO Step 9.
		<u>IF</u> State EOC did <u>NOT</u> acknowledge message, <u>THEN</u> do the following:
		1) Use DEM ARD phone to contact State EOC (Alternate: (804) 674-2400 (ask for Duty Officer)).
		<u>IF</u> all means of communications with State EOC are inoperable, <u>THEN</u> do the following:
		a) Notify SEM/RM.
		b) GO TO Step 9.
		2) Read Items 1 through 9.
		3) GO TO Step 9.

(STEP 7 CONTINUED ON NEXT PAGE)

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	24
		PAGE 5 of 17

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7	SEND REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS: (Continued)	
	i) Use DEM ARD phone to contact State EOC (Alternate: (804) 674-2400 (ask for Duty Officer))	i) <u>IF</u> all means of communications with State EOC are inoperable, <u>THEN</u> do the following:
		1) Use Instaphone to transmit Item 10 to local EOCs.
		2) Record the following on second page of Attachment 2:
		• "Transmitted Item 10 to local EOCs."
		• Date and time transmitted to each local EOC.
		3) GO TO Step 9.
	j) Check State EOC acknowledged message	j) Read Items 1 through 9.
	k) Read Items 10 and 11	
	l) Consult with State EOC Duty Officer to determine desired update message schedule	
	m) Record the following at Item 12:	
	• Update message schedule	
	• State EOC Duty Officer's name	
8	RECORD DATE AND TIME TRANSMITTAL OF ITEMS TO STATE EOC COMPLETE	

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

<b>NUMBER</b> EPIP-2.01	<b>PROCEDURE TITLE</b> NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	<b>REVISION</b> 24 <b>PAGE</b> 6 of 17
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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\_\_\_\_\_ 9 VERIFY ALL LOCAL EOCs ANSWERED  
ACKNOWLEDGEMENT ROLL CALL

IF any EOC(s) did NOT answer  
acknowledgement roll-call, THEN do  
the following:

- a) Use telephone to call EOC(s)  
that did not answer.
- b) Refer to the table below for  
order of priority and list of  
local EOC phone numbers:

Louisa:	(540) 967-1234 (local)
Spotsylvania:	(540) 582-7115
Caroline:	(804) 633-5555
Orange:	(540) 672-1234
Hanover:	(804) 537-6140

- c) IF State EOC notified, THEN  
read Items 1 through 9.

IF NO communications with State  
EOC, THEN read Items 1 through  
10.

- d) Record the following on  
Attachment 2:

- Method of contact.
- Reason Instaphone failed (if  
known).
- Date and time of contact.

\_\_\_\_\_ 10 GO TO STEP 12

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	24
		PAGE 7 of 17

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

**NOTE:** Other personnel may assist by making notifications simultaneously using other telephones.

11 SEND ATTACHMENT 2 USING  
ALTERNATIVE MEANS:

a) Call State EOC:

1) Use DEM ARD (Alternate:  
(804) 674-2400, ask for EOC  
Duty Officer)

2) Read entire Attachment 2

3) Record date/time transmittal  
to State EOC complete

b) Call each local EOC and read  
Items 1 through 9:

Louisa:	(540) 967-1234 (local)
Spotsylvania:	(540) 582-7115
Caroline:	(804) 633-5555
Orange:	(540) 672-1234
Hanover:	(804) 537-6140

c) Record date/time transmittal of  
Items 1 through 9 complete

12 NOTIFY SEM/RM TRANSMITTAL WAS SENT

13 KEEP ATTACHMENT 2 WITH THIS  
PROCEDURE

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	24
		PAGE 8 of 17

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
14	CHECK IF ITEM 11 ON REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS INDICATES REPORT OF RADIOLOGICAL CONDITIONS - REQUIRED	GO TO Step 17.
	<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• The initial Report of Radiological Conditions must be transmitted to the State EOC (or State representatives in the LEOF/CEOF) as soon as possible following the release of radioactive material.</li> <li>• Follow-up reports should be issued approximately every 60 minutes or when there are changes in radiological conditions. Time should be measured from time of delivery, time facsimile sent, or time verbal transmittal completed.</li> </ul>	
15	<p>GET REPORT OF RADIOLOGICAL CONDITIONS FOR THE STATE:</p> <p>a) Check if either of the following Radiological Status reports available:</p> <ul style="list-style-type: none"> <li>• MIDAS Radiological Status report</li> </ul> <p style="text-align: center;"><u>OR</u></p> <ul style="list-style-type: none"> <li>• EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE, Attachment 1, Radiological Status</li> </ul> <p>b) Get Radiological Status report from radiological assessment organization</p> <p>c) Check report - COMPLETE</p>	<p>a) Do the following:</p> <ol style="list-style-type: none"> <li>1) Determine from radiological assessment organization when report will be available.</li> <li>2) Notify SEM/RM about delay.</li> <li>3) <u>WHEN</u> Radiological Status report becomes available, <u>THEN</u> continue in this procedure.</li> </ol> <p>c) <u>IF</u> blank items remain on Radiological Status report, <u>THEN</u> return report to radiological assessment organization for completion.</p>

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	24
		PAGE 9 of 17

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
16	<p>SEND REPORT OF RADIOLOGICAL CONDITIONS TO THE STATE TO EOC:</p> <ul style="list-style-type: none"> <li>a) Attach Radiological Status report to Attachment 3</li> <li>b) Follow Attachment 3 Part I, Instructions for Virginia Power/North Anna Emergency Communicator</li> <li>c) Check Report of Radiological Conditions to the State - SENT VIA FACSIMILE MACHINE</li> <li>d) Allow 5 minutes for State EOC Duty Officer to verify receipt of message</li> <li>e) Check receipt of message - VERIFIED BY STATE EOC DUTY OFFICER</li> <li>f) Record Date/Time verified on Attachment 3 Part III Item 1</li> <li>g) Notify SEM/RM transmittal - SENT</li> <li>h) Keep Attachment 3 with this procedure</li> </ul>	<ul style="list-style-type: none"> <li>c) IF Radiological Status report communicated verbally or delivered, <u>THEN</u> GO TO Step 16.g.</li> <li>e) IF receipt of message <u>NOT</u> verified, <u>THEN</u> do the following: <ul style="list-style-type: none"> <li>1) Call State EOC on DEM ARD (Alternate: (804) 674-2400).</li> <li>2) Ask State EOC Duty Officer if message received.</li> <li>3) IF receipt of message verified, <u>THEN</u> GO TO Step 16.f.</li> </ul> </li> <li>IF message <u>NOT</u> received, <u>THEN</u> do the following: <ul style="list-style-type: none"> <li>a) Follow Attachment 3 Part I Item 6 instructions.</li> <li>b) GO TO Step 16.g.</li> </ul> </li> </ul>

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 24
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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**NOTE:** Follow-up reports of emergency conditions must be provided to State and local governments approximately every 60 minutes (from previous message notification start time) or when there are changes in emergency conditions, unless otherwise agreed upon with the State.

\_\_\_\_ 17 CHECK ANY OF THE FOLLOWING MESSAGE UPDATE CONDITIONS - EXISTS:

- Status of any of the following Report of Emergency items - CHANGED:

- Emergency class (including event termination)
- Offsite Assistance Required
- Site Evacuation
- Prognosis Worsening

- Radioactive Release
- Protective Action Recommendation

OR

- Updated Radiological Status report provided by radiological assessment organization

OR

- Follow-up report due IAW schedule established with State EOC Duty Officer

WHEN Report of Emergency message update conditions satisfied, THEN RETURN TO Step 3.

WHEN Report of Radiological Conditions message update conditions satisfied, THEN RETURN TO Step 15.

IF termination message has been sent, THEN GO TO Step 27.

\_\_\_\_ 18 RETURN TO APPLICABLE STEP AS INDICATED BELOW:

Report of Emergency to State and Local Governments	RETURN TO Step 3
Report of Radiological Conditions to the State	RETURN TO Step 15

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• Data may be obtained from meteorological panel charts (via TSC staff communicating with Control Room when ERFCS not available) or ERFCS (group reviews or EMCOMM, activated by typing EMCOMM and pressing the gray button labeled LAST).</li> <li>• Both the ERFCS EMCOMM feature and ERFCS Group Review #39, COMERDS-1, Common ERDS Points, contain meteorological information averaged over the previous 15 minutes.</li> </ul>	<p><u>IF</u> on-site data <u>NOT</u> available, <u>THEN</u> do the following:</p> <p>a) Get regional information from one of the following:</p> <ul style="list-style-type: none"> <li>• Company Weather Center: (804) 273-3025.</li> <li>• National Weather Service (NWS): (800) 737-8624.</li> <li>• Have HP initiate EPIP-4.10, DETERMINATION OF X/Q.</li> </ul> <p>b) Give meteorological information to requestor.</p> <p>c) RETURN TO procedure step in effect.</p>
19	CHECK ON-SITE METEOROLOGICAL INFORMATION - AVAILABLE	

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED										
<p>_____ 20 GET ON-SITE METEOROLOGICAL INFORMATION AS REQUESTED:</p> <p style="margin-left: 40px;">a) Refer to specified step(s) to acquire requested information:</p> <table border="1" style="margin-left: 80px; border-collapse: collapse; width: 40%;"> <tbody> <tr> <td style="padding: 2px;">Temperature</td> <td style="padding: 2px;">Step 21</td> </tr> <tr> <td style="padding: 2px;">Wind Speed</td> <td style="padding: 2px;">Step 22</td> </tr> <tr> <td style="padding: 2px;">Wind Direction</td> <td style="padding: 2px;">Step 23</td> </tr> <tr> <td style="padding: 2px;">Affected Sectors</td> <td style="padding: 2px;">Steps 23 and 24</td> </tr> <tr> <td style="padding: 2px;">Stability Class</td> <td style="padding: 2px;">Step 25</td> </tr> </tbody> </table> <p style="margin-left: 40px;">b) Give meteorological information to requestor</p> <p style="margin-left: 40px;">c) RETURN TO procedure step in effect</p>	Temperature	Step 21	Wind Speed	Step 22	Wind Direction	Step 23	Affected Sectors	Steps 23 and 24	Stability Class	Step 25		
Temperature	Step 21											
Wind Speed	Step 22											
Wind Direction	Step 23											
Affected Sectors	Steps 23 and 24											
Stability Class	Step 25											
<p>_____ 21 GET TEMPERATURE FROM MAIN TOWER TEMPERATURE INDICATOR</p> <p style="margin-left: 40px;"><b>NOTE:</b> Primary source of wind speed is the Main Tower Lower Level indicator. Alternates sources are (1) Backup Tower, and (2) Main Tower Upper Level.</p>												
<p>_____ 22 GET WIND SPEED</p>												

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

- NOTE:**
- An approximate average wind direction for previous 15 minutes should be determined.
  - Primary source of wind direction is the Main Tower Lower indicator. Alternates sources are (1) Backup Tower, and (2) Main Tower Upper Level.
  - Wind direction is always given as the compass point the wind blows from. Example: Wind direction is from East North East (ENE).

23 GET WIND DIRECTION IN TERMS OF  
COMPASS POINT WIND BLOWING FROM:

DEGREES	COMPASS POINT	DEGREES	COMPASS POINT	DEGREES	COMPASS POINT
0-11	N	192-214	SSW	350-371	N
12-34	NNE	215-236	SW	372-394	NNE
35-56	NE	237-259	WSW	395-416	NE
57-79	ENE	260-281	W	417-439	ENE
80-101	E	282-304	WNW	440-461	E
102-124	ESE	305-326	NW	461-484	ESE
125-146	SE	327-349	NNW	485-506	SE
147-169	SSE			507-529	SSE
170-191	S			530-540	S

CONTINUOUS ACTION PAGE FOR EPIP-2.01

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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**NOTE:** Downwind sectors are recorded using alphabetic designations.

24 DETERMINE DOWNWIND SECTORS:

COMPASS POINT	DOWNWIND SECTORS	COMPASS POINT	DOWNWIND SECTORS
N	H - J - K	S	R - A - B
NNE	J - K - L	SSW	A - B - C
NE	K - L - M	SW	B - C - D
ENE	L - M - N	WSW	C - D - E
E	M - N - P	W	D - E - F
ESE	N - P - Q	WNW	E - F - G
SE	P - Q - R	NW	F - G - H
SSE	Q - R - A	NNW	G - H - J

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

- NOTE:**
- Main Tower Delta T is the preferred source of stability class. Sigma Theta (Backup Tower) is the secondary source.
  - The value closer to "G" should be used if unable to distinguish Delta T or Sigma Theta value.
  - Numerical ranges presented below for Delta T and Sigma Theta are less than the range of the chart recorder and indicator in the Control Room. Indications are not expected to read outside the ranges found on these tables.

25 DETERMINE STABILITY CLASS:

MAIN TOWER DELTA T			BACKUP TOWER SIGMA THETA		
DELTA T (°F)		STABILITY CLASS	SIGMA THETA (°)		STABILITY CLASS
≤ -1.31	=	A	≥ 22.5	=	A
-1.30 to -1.18	=	B	22.4 to 17.5	=	B
-1.17 to -1.04	=	C	17.4 to 12.5	=	C
-1.03 to -0.35	=	D	12.4 to 7.5	=	D
-0.34 to +1.04	=	E	7.4 to 3.8	=	E
+1.05 to +2.77	=	F	3.7 to 2.1	=	F
> +2.77	=	G	< 2.1	=	G

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

NUMBER	PROCEDURE TITLE	REVISION
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p><b>NOTE:</b> Responsibilities may be transferred to relief within a facility or to another facility, e.g., Control Room to TSC, Control Room to LEOF or CEOF, or TSC to LEOF or CEOF.</p>	
26	<p>TRANSFER RESPONSIBILITY FOR STATE/LOCAL NOTIFICATIONS:</p> <ul style="list-style-type: none"> <li>a) Notify SEM (or RM if in LEOF/CEO)</li> <li>b) Tell relief Emergency Communicator about current event status</li> <li>c) Review most recently completed Attachments 2 and 3 with relief</li> <li>d) Tell relief Emergency Communicator when next notification is due</li> <li>e) Provide this procedure and all attachments or send copies of attachments to relief</li> <li>f) Have relief/turnover recorded in event log</li> <li>g) Check - INTERFACILITY TURNOVER HAS BEEN COMPLETED</li> </ul>	<p>g) RETURN TO step in effect prior to relief.</p>

1. REPORT OF EMERGENCY CONDITION CHANGE CRITERIA

WHEN emergency conditions change (e.g., classification, event termination, offsite assistance, site evacuation, worsening prognosis, release of radioactive material, Protective Action Recommendation), THEN do one of the following:

- a. IF preparation of a new/revised message will prevent timely transmittal of an initial message reporting an emergency class (i.e., within 15 minutes of classification), THEN do the following:
  - 1) Complete transmittal of current message.
  - 2) RETURN TO Step 3 to prepare new emergency message.
- b. IF new/revised message can be prepared without delaying timely transmittal of an initial message reporting an emergency class, THEN do one the following:
  - Update current message to include changed condition(s).
  - RETURN TO Step 3 to prepare new emergency message.

2. REPORT OF EMERGENCY UPDATE CRITERIA

WHEN scheduled Report of Emergency to State and Local Governments - DUE, THEN RETURN TO Step 3 to prepare new emergency message.

NOTE: Transmittal of a Report of Emergency to State and Local Governments takes precedence over preparing a new radiological status message, responding to requests for meteorological information and turning-over duties to relief.

3. REPORT OF RADIOLOGICAL STATUS CONDITION CHANGE CRITERIA

WHEN updated Radiological Status report provided by radiological assessment organization, THEN RETURN TO Step 15 to prepare new radiological status message.

4. METEOROLOGICAL INFORMATION REQUEST CRITERIA

IF requested to acquire on-site meteorological information, THEN GO TO Step 19.

5. SHIFT RELIEF OR INTERFACILITY TURNOVER CRITERIA

WHEN shift relief or interfacility turnover occurs, THEN GO TO Step 26.

<b>NUMBER</b> EPIP-2.01	<b>PROCEDURE TITLE</b> NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	<b>REVISION</b> 24 <b>PAGE</b> 17 of 17
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 27	<b>TERMINATE PROCEDURE:</b> <ul style="list-style-type: none"> <li>• Give EPIP-2.01, forms and other applicable records to the Control Room STA (TSC Emergency Procedures Coordinator or EOF Services Coordinator)</li> <li>• Completed by: _____</li> <li>  Date: _____</li> <li>  Time: _____</li> </ul>	
	-END-	

NUMBER	ATTACHMENT TITLE	REVISION
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ATTACHMENT		PAGE
1		1 of 7

**Form Field**

**Instructions for Preparing Form:**

**Approval  
(SEM or RM)**

Leave blank. (The Station Emergency Manager (SEM) or Recovery Manager (RM) signs/initials this space after message is drafted.)

**Message #**

Record sequential message number on pages 1 and 2.

A single numbering sequence is used for Reports of Emergency to State and Local Governments (Attachment 2) from the initial classification until the Emergency Plan is exited. The numbering sequence for Reports of Radiological Conditions to the State (Attachment 3) is separate.

**Notification  
Start Time**

Leave blank. (Enter notification start time when beginning transmittal of the approved message.)

**Location**

Check off facility from which notification will be made.

**Roll Call**

Leave blank. (Check off recipients of the emergency message when they answer the roll call.)

- NOTE:**
- Information to complete Items 1-2 and 4-7 obtained from SEM/RM.
  - Items 4, 5, 6, 7 and/or 8 are optional for a message reporting initial entry into the Emergency Plan or an emergency class change, including emergency termination and may be checked 'Excluded from this message.'
  - Inclusion of optional items, e.g., Item 6, Evacuation of onsite personnel, should be considered when it can result in avoiding an immediate follow-up message.

**Item 1**

**Emergency Class.**

IF message initial or follow-up report, THEN do the following:

- Check block for highest applicable emergency class.
- Enter time (0001-2400) and date of declaration.

IF initial message is also a termination report, THEN record time of termination Item 3.

IF message emergency termination report, THEN do the following:

- Check Emergency Terminated block.
- Complete Items 2, 3 and 9.

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**Form Field**

**Instructions for Preparing Form:**

**Item 2**

**Release of radioactive material.**

The SEM/RM determines whether a release of radioactive material is occurring, has occurred, has occurred and has been terminated, or is projected to occur based on plant indications and/or consultation with the RAD/RAC. For the purposes of emergency messages, release refers to a radiological release attributable to the emergency event.

**Item 3**

**Remarks / Description of event.**

Write Remarks / Description of event in plain language. Avoid technical jargon, abbreviations and acronyms.

Explain any change in the prognosis of situation (Item 7) reported in the previous message.

IF Item 2 indicated a radiological release is occurring or has occurred, THEN remarks should be entered placing the release in context, e.g., release is estimated to be confined to the site, release estimated to be within normal plant limits, site boundary dose rates are below offsite protective action levels.

Avoid repeating Remarks / Description of event from the previous message.

The description should describe current conditions at the time the report approved by the SEM/RM.

**Item 4**

**Assistance requested.**

[ ] Excluded from this message may be checked for the initial report of any emergency class only (including termination).

This item documents requests that have been made for on-site assistance from off-site organizations such as from fire departments, rescue squads or law enforcement agencies, including local law enforcement, Virginia State Police, Federal Bureau of Investigation, etc.). This item is NOT for requesting assistance. A check block for other off-site organizations and space to record a description of the off-site organization is provided, e.g., U.S. Department of Energy.

Continue to record requests for assistance until the request has been canceled or off-site assistance has been released. For an ambulance, continue to record request for assistance until the ambulance has been released from the hospital.

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Form Field

Instructions for Preparing Form:

Item 5

**Emergency Response Actions Underway.**

[ ] Excluded from this message may be checked for the initial report of any emergency class only (including termination).

Check blocks are provided for the following:

[ ] Station monitoring teams dispatched offsite (teams may be dispatched for any emergency classification, but dispatch is generally required at the Site Area Emergency and General Emergency classifications)

[ ] Station emergency personnel called in (unless special circumstances are involved, station emergency personnel are called-in at an Alert or higher emergency class, but may be called-in for a Notification of Unusual Event)

[ ] Other (examples of other emergency response actions include dispatch of damage control teams, relocation of personnel from selected areas, etc.)

Item 6

**Evacuation of onsite personnel.**

[ ] Excluded from this message may be checked for the initial report of any emergency class only (including termination).

The Remote Assembly Area is selected in accordance with EPIP-5.05, SITE EVACUATION.

An "Other" check block is provided in case personnel are evacuated to different location, e.g., local evacuation assembly center.

Early release of personnel, i.e., non-essential personnel are sent home early, is reported in Item 3, Remarks / Description of event.

Continue to record evacuation of onsite personnel until evacuated personnel released from the applicable Remote Assembly Area.

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Form Field

Instructions for Preparing Form:

**NOTE:** Changes in the prognosis of situation should be explained in Item 3, Remarks / Description of event.

Item 7

Prognosis of situation.

[ ] Excluded from this message may be checked for the initial report of any emergency class only (including termination).

The "Other" check block can be used to provide an indication of anticipated event termination, e.g., emergency will be terminated when unit reaches cold shutdown at or about 1700 hours.

Item 8

Meteorological data.

[ ] Excluded from this message may be checked for the initial report of any emergency class only (including termination).

[ ] Not available may be checked when waiting for meteorological information will delay transmission of a message. Efforts to obtain meteorological data from alternative sources should not delay sending emergency messages.

Check [ ] Based on onsite measurements when meteorological information is acquired from onsite instruments.

Onsite measurements may be acquired from any of the following:

- ERFCS EMCOMM feature (15-minute average) (activated by typing EMCOMM and pressing the gray button labeled LAST)
- ERFCS Group Review #39, COMERDS-1, Common ERDS Points (15-minute average)
- Control Room meteorological panel charts (approximate average for previous 15 minutes) (communicate with Control Room staff when ERFCS not available in other facilities)

[Instructions for Item 8, Meteorological data, continued on following page.]

NUMBER	ATTACHMENT TITLE	REVISION
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**Form Field**

**Instructions for Preparing Form:**

**Item 8**  
[continued]

**Meteorological data.**

Multiple indications of wind direction and wind speed are available. The priority for using these indications is:

- 1 Main Tower Lower Level
- 2 Backup Tower
- 3 Main Tower Upper Level

Check [ ] Based on offsite regional data when onsite measurements are NOT available. Regional wind speed and wind direction data may be obtained from the following in the order indicated:

- 1 Company Weather Center, (804) 273-3025
- 2 National Weather Service (NWS), (800) 737-8624

Use the following table to convert indicated degree reading to compass point wind blowing from.

DEGREES	COMPASS POINT
0-11 or 350-371	N (NORTH)
12-34 or 372-394	NNE (NORTH NORTHEAST)
35-56 or 395-416	NE (NORTHEAST)
57-79 or 417-439	ENE (EAST NORTHEAST)
80-101 or 440-461	E (EAST)
102-124 or 462-484	ESE (EAST SOUTHEAST)
125-146 or 485-506	SE (SOUTHEAST)
147-169 or 507-529	SSE (SOUTH SOUTHEAST)
170-191 or 530-540	S (SOUTH)
192-214	SSW (SOUTH SOUTHWEST)
215-236	SW (SOUTHWEST)
237-259	WSW (WEST SOUTHWEST)
260-281	W (WEST)
282-304	WNW (WEST NORTHWEST)
305-326	NW (NORTHWEST)
327-349	NNW (NORTH NORTHWEST)

Record wind direction in compass point wind is blowing from.

Record wind speed.

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-2.01	INSTRUCTIONS FOR COMPLETING REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS	24
ATTACHMENT 1		PAGE 6 of 7

Form Field      Instructions for Preparing Form:

**Item 9      Emergency Communicator identification.**

Enter name of Emergency Communicator.

**Roll Call**      Leave blank. (Check off recipients of the emergency message when they answer the roll call.)

**Message Close-Out**      Leave blank. (Check off facility from which notification was made and enter date/time after transmitting Items 1-9.)

**Item 10      Recommended offsite protective actions.**

IF Item 1 indicates the emergency class is a Notification of Unusual Event, Alert or Site Area Emergency, THEN check  
[ ] None.

IF Item 1 indicates the emergency class is a General Emergency, THEN copy recommended offsite protective action from EPIP-1.06, PROTECTIVE ACTION RECOMMENDATION, Attachment 3, in Item 10.

**Item 11      Report of Radiological Conditions.**

IF Item 2 indicates a release of radioactive material has NOT occurred and is NOT projected, THEN check [ ] We will not issue a Report of Radiological Conditions.

IF a Report of Radiological Conditions is required AND all the following conditions are met:

- LEOF (or CEOF) - RESPONSIBLE FOR STATE NOTIFICATIONS
- Department of Emergency Management - PRESENT
- Department of Health (Radiological Health Programs) representative - PRESENT

THEN check [ ] We will provide the Report of Radiological Conditions to the State representatives in the LEOF (CEOF).

IF a Report of Radiological Conditions is required AND has to be transmitted to the State EOC, THEN check [ ] We will transmit a Report of Radiological Conditions to the State EOC.

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-2.01	INSTRUCTIONS FOR COMPLETING REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS	24
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Form Field

Instructions for Preparing Form:

Item 12

Update schedule and name of State EOC Duty Officer.

Leave blank. (Update schedule and identification of State EOC Duty Officer is determined in consultation with the State EOC Duty Officer after message is transmitted.)

Message  
Close-Out

Leave blank. (Check off facility from which notification was made and enter date/time after transmitting Items 10-12.)

<b>NUMBER</b>	<b>ATTACHMENT TITLE</b>	<b>REVISION</b>
EPIP-2.01	REPORT OF EMERGENCY TO	24
<b>ATTACHMENT</b>	STATE AND LOCAL GOVERNMENTS	<b>PAGE</b>
2		1 of 2

APPROVAL: (SEM or RM): \_\_\_\_\_; MESSAGE # \_\_\_\_\_; TIME NOTIFICATION STARTED: \_\_\_\_\_

This is North Anna Power Station ☐ Control Room ☐ TSC ☐ LEOF ☐ CEOF. Standby for a roll-call followed by an emergency message. Use a Report of Emergency form to copy this message. (Conduct a roll-call and check boxes as each party answers)

☐ Louisa County      ☐ State EOC      ☐ Orange County  
☐ Spotsylvania County      ☐ Hanover County      ☐ Caroline County

The emergency message is as follows: (READ SLOWLY)

Item 1: Emergency Class:

<input type="checkbox"/> Notification of Unusual Event	<input type="checkbox"/> Site Area Emergency	Declared at _____ on _____ (24-hr time)      (date)
<input type="checkbox"/> Alert	<input type="checkbox"/> General Emergency	

☐ Emergency Terminated

Item 2: Release of radioactive material:

☐ Has NOT occurred and is NOT projected      ☐ Is presently occurring  
☐ Has occurred and is now terminated      ☐ Is projected to occur

Item 3: Remarks / Description of event: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**NOTE:** Items 4 - 8 may be excluded from initial message reporting any emergency class (including termination).

Item 4: Assistance requested:

☐ Excluded from this message

☐ None  
 \_\_\_\_\_ (#) Fire Units from \_\_\_\_\_  
 \_\_\_\_\_ (#) Police Units from \_\_\_\_\_  
 \_\_\_\_\_ (#) Rescue Units from \_\_\_\_\_  
☐ Other \_\_\_\_\_

Item 5: Emergency response actions underway:

☐ Excluded from this message

☐ None  
☐ Station monitoring teams dispatched offsite  
☐ Station emergency personnel called in  
☐ Other \_\_\_\_\_

Item 6: Evacuation of onsite personnel:

☐ Excluded from this message

☐ No  
☐ Yes, evacuated to: ☐ Primary Remote Assembly Area  
☐ Secondary Remote Assembly Area  
☐ Other \_\_\_\_\_

(ATTACHMENT 2 CONTINUED ON NEXT PAGE)

NUMBER EPIP-2.01	ATTACHMENT TITLE REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS	REVISION 24
ATTACHMENT 2		PAGE 2 of 2

MESSAGE # \_\_\_\_\_

Item 7: Prognosis of situation: ☐ Excluded from this message  
☐ Improving ☐ Stable  
☐ Worsening ☐ Other \_\_\_\_\_

Item 8: Meteorological data is: ☐ Excluded from this message  
☐ Based on onsite measurements; ☐ Based on offsite regional data;  
☐ Wind direction is from the \_\_\_\_\_; ☐ Wind speed is \_\_\_\_\_ mph  
☐ Not available

Item 9: This is (name) \_\_\_\_\_/Emergency Communicator.  
Please acknowledge receipt of this message. (Conduct roll-call and check boxes)

☐ Louisa County ☐ State EOC ☐ Orange County  
☐ Spotsylvania County ☐ Hanover County ☐ Caroline County

This is North Anna Power Station ☐ Control Room ☐ TSC ☐ LEOF ☐ CEOF out at \_\_\_\_\_ on \_\_\_\_\_.  
(24-hr time) (date)

**NOTE:** The remainder of this report is not transmitted when the message reports emergency termination. When transmitted, the following information is for state use only. Transmit to State EOC using the DEM ARD.

This is North Anna Power Station ☐ Control Room ☐ TSC ☐ LEOF ☐ CEOF continuing the emergency message.

Item 10: Recommended offsite protective actions are:

☐ None

☐ Standard: Evacuate 360° from 0 miles to 5 miles.

☐ Expanded:

☐ Evacuate 360° from 0 miles to 5 miles.

☐ Evacuate 360° from 5 miles to \_\_\_\_\_ miles.

☐ Evacuate sectors \_\_\_\_\_ from \_\_\_\_\_ miles to \_\_\_\_\_ miles.

☐ Shelter 360° from \_\_\_\_\_ miles to \_\_\_\_\_ miles.

☐ Shelter sectors \_\_\_\_\_ from \_\_\_\_\_ miles to \_\_\_\_\_ miles.

☐ Shelter unaffected sectors from \_\_\_\_\_ miles to \_\_\_\_\_ miles.

Item 11: ☐ We will transmit a Report of Radiological Conditions to the State EOC.  
☐ We will provide the Report of Radiological Conditions to the State representatives in the LEOF (CEOFF).  
☐ We will not issue a Report of Radiological Conditions.

Item 12: Update schedule: ☐ 60 minute; ☐ Other \_\_\_\_\_

Name of State EOC Duty Officer: \_\_\_\_\_

This is North Anna Power Station ☐ Control Room ☐ TSC ☐ LEOF ☐ CEOF out at \_\_\_\_\_ on \_\_\_\_\_.  
(24-hr time) (date)

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-2.01	REPORT OF RADIOLOGICAL CONDITIONS TO THE STATE	24
ATTACHMENT		PAGE
3		1 of 1

**PART I. Instructions for North Anna Emergency Communicator:**

1. Check name of facility: [ ] Control Room [ ] TSC [ ] Local EOF [ ] Central EOF

2. Record Message #: \_\_\_\_\_ Communicator's name: \_\_\_\_\_ Call-back #: ( ) - \_\_\_\_\_

3. Check which report is attached and record the report number and run time (as appropriate):

\_\_\_\_\_ MIDAS Radiological Status computer printout (2 pages) Report # \_\_\_\_\_ Run Time \_\_\_\_\_  
 \_\_\_\_\_ Radiological Status attachment from EPIP-4.03 (1 page) Report # \_\_\_\_\_

4. Have Station Emergency Manager (SEM) / Recovery Manager (RM) approve transmittal:

APPROVED FOR TRANSMITTAL: \_\_\_\_\_ (SEM / RM initials) DATE: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ TIME: \_\_\_\_ :

5. IF report can be delivered to both VDES AND VDH staff in EOF, THEN GO TO PART I, ITEM 6.  
IF report will be sent by facsimile, THEN notify State EOC Report of Radiological Conditions will be sent by facsimile (Use DEM ARD or (804) 674-2400) and request receipt confirmation.

6. Deliver report to both VDEM AND VDH staff in EOF:

- Date/Time Message Delivered to VDEM Representative in Local/Central EOF: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ :
- Date/Time Message Delivered to VDH Representative in Local/Central EOF: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ :
- Record N/A by Part II and Part III below.

IF report will be sent by facsimile, THEN ask facsimile machine operator to transmit this message.

IF transmittal of report by facsimile NOT achievable, THEN do the following:

- Notify State EOC using DEM ARD or call (804) 674-2400
- Identify yourself and your location
- Ask LOC Duty Officer to use a Report of Radiological Conditions form to copy message
- Read the attached report
- Record when message transmittal completed: Date/Time Message Completed: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ :
- Record N/A by Part II and Part III below.

**PART II. Instructions for Facsimile Machine Operator:**

1. Record Facsimile Operator's name : \_\_\_\_\_ Date/Time Sent: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ :

2. Transmit this message to State EOC facsimile machine (804) 674-2419.

IF facsimile transmission NOT successful, THEN RETURN message to Emergency Communicator.

3. Return original report to State and Local Emergency Communicator.

**PART III. Instructions for State EOC Duty Officer:**

1. Notify North Anna Emergency Communicator report received. Date/Time Verified: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ :  
 (Use DEM ARD or see PART I, Item 2 above for call-back number). Receipt Verification

2. Forward message to EOC Operations Officer for distribution to State Radiological Health Programs and Information & Planning representatives.

VIRGINIA POWER  
NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT (With 6 Attachments)	REVISION 13
		PAGE 1 of 15

PURPOSE

Use backup (manual) dose assessment calculations to assess consequences of actual or potential offsite releases.

**LEVEL 2 DISTRIBUTION**  
This Document Should Be Verified  
And Annotated To A Controlled Source  
As Required to Perform Work

ENTRY CONDITIONS

Any of the following:

1. Entry from EPIP-4.01, RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE.
2. Entry from EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE.
3. Direction by the Station Emergency Manager.
4. Direction by the Radiological Assessment Director or Radiological Assessment Coordinator.

Approvals on File

Effective Date

9/13/01

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 2 of 15
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1 INITIATE PROCEDURE:

• By: \_\_\_\_\_

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

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

- NOTE:
- No release is assumed from the air ejector if it is diverted to containment.
  - No release is assumed from the AFWPT pathway if the AFWPT is isolated.
  - Results of dose rate calculations are additive if release is through independent pathways.
  - Results of releases from the same pathway are not additive.

2 DETERMINE SITE BOUNDARY DOSE RATES (mrem/hr) FOR VENTILATION RELEASE:

IF release is through the Main Steam System, THEN GO TO Step 3.

a) Ask SEM to have an individual observe monitor in alarm and report increase or decrease in readings

OR

IF release is from containment leakage, THEN GO TO Step 4.

(STEP 2 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13
		PAGE 3 of 15

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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2 DETERMINE SITE BOUNDARY DOSE RATES  
(mrem/hr) FOR VENTILATION RELEASE: (Continued)

\*\*\*\*\*

CAUTION: During implementation of Design Change 99-006, Ventilation Radiation Monitoring System Replacement, the user needs to identify whether Kaman or MGPI monitor is being used (for GW-178, VG-179 and VG-180).

\*\*\*\*\*

NOTE: MGPI Normal Range Noble Gas monitors: 178-1, 179-1 and 180-1.  
MGPI High Range Noble Gas monitors: 178-2, 179-2 and 180-2.

b) Get number of monitor in alarm  
(or monitor of interest):

Release Path	Normal Range	Kaman (MGPI)	High Range (NRC)
Process Vent	GW-102	GW-178-1, -2	RM-GW-173
Vent Vent A	VG-104	VG-179-1, -2	RM-VG-174
Vent Vent B	VG-113	VG-180-1, -2	RM-VG-175
Air Ejector	SV-121, 221		

c) Circle appropriate monitor  
number on Attachment 1

(STEP 2 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 4 of 15
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

2 DETERMINE SITE BOUNDARY DOSE RATES  
(mrem/hr) FOR VENTILATION RELEASE: (Continued)

d) Get monitor readings, above  
background, and flow rates for  
pathway of interest

AND

Record data on Attachment 1

d) IF flow rates NOT available,  
THEN use default flow rates:

- VVA - 142,000 cfm
- VVB - 100,000 cfm
- PV - 310 cfm
- CAE - 25 cfm

NOTE: • Main Tower Delta T is the preferred source of stability class.  
Sigma Theta (Backup Tower) is the secondary source.

- Primary source of wind speed is the Main Tower Lower Level indicator. Alternates sources are (1) Backup Tower, and (2) Main Tower Upper Level.

e) Get Stability Class and Wind  
Speed (from Emergency  
Communicator, ERFCS, RAD or  
RAC):

- Stability Class: \_\_\_\_\_
- Wind Speed: \_\_\_\_\_

f) Get X/Q and conversion factors  
from Attachment 4:

- Site Boundary X/Q for  
Stability Class in effect
- Monitor Conversion Factor  
(MCF) based on accident type
- TEDE DCF
- THY DCF

(STEP 2 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 5 of 15
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

2 DETERMINE SITE BOUNDARY DOSE RATES  
(mrem/hr) FOR VENTILATION RELEASE: (Continued)

- g) Record X/Q, wind speed and conversion factors on Attachment 1
- h) Determine Site Boundary TEDE and THY CDE, mrem/hr, using Attachment 1
- i) Record results of Attachment 1 on to Attachment 5

3 DETERMINE SITE BOUNDARY DOSE RATES  
(mrem/hr) FOR MAIN STEAM RELEASE:

- a) Check if actual or potential release pathway exists through Main Steam Safety Valves or Auxiliary Feedwater Pump Turbine Exhaust (AFWPT)
- a) IF NO release through Main Steam System, THEN GO TO Step 4.
- b) Determine number of monitor in alarm:

Unit 1 Main Steam

RM-RMS-170 (A Safety Valves)  
RM-RMS-171 (B Safety Valves)  
RM-RMS-172 (C Safety Valves)

Unit 2 Main Steam

RM-RMS-270 (A Safety Valves)  
RM-RMS-271 (B Safety Valves)  
RM-RMS-272 (C Safety Valves)

Unit 1 AFWPT

RM-MS-176

Unit 2 AFWPT

RM-MS-276

(STEP 3 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3 DETERMINE SITE BOUNDARY DOSE RATES  
(mrem/hr) FOR MAIN STEAM RELEASE: (Continued)

c) Get reading of monitor in alarm

AND

Record reading on Attachment 2

NOTE: • Main Tower Delta T is the preferred source of stability class.  
Sigma Theta (Backup Tower) is the secondary source.

- Primary source of wind speed is the Main Tower Lower Level indicator. Alternates sources are (1) Backup Tower, and (2) Main Tower Upper Level.

d) Get Stability Class and Wind Speed:

- Stability Class: \_\_\_\_\_
- Wind Speed: \_\_\_\_\_

e) Get X/Q and conversion factors from Attachment 4:

- Site Boundary X/Q for Stability Class in effect
- Monitor Conversion Factor (MCF) based on accident type
- TEDE DCF
- THY DCF

f) Record X/Q, wind speed and conversion factors on Attachment 2

(STEP 3 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 7 of 15
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3	<p>DETERMINE SITE BOUNDARY DOSE RATES (mrem/hr) FOR MAIN STEAM RELEASE: (Continued)</p> <p>g) Ask Operations for the number of Main Steam Safety Valves that have lifted or may potentially lift</p> <p style="text-align: center;"><u>AND</u></p> <p>Record on Attachment 2</p> <p>h) Check status of AFWPT isolation (from RAD or RAC)</p> <p>i) Calculate Site Boundary TEDE and THY CDE dose rates using Attachment 2</p> <p>j) Record results of Attachment 2 on to Attachment 5</p>	<p>g) <u>IF</u> none, <u>THEN</u> project release using only <u>ONE</u> valve.</p>
4	<p>DETERMINE SITE BOUNDARY DOSE RATES (mrem/hr) FROM CONTAINMENT LEAKAGE:</p>	<p><u>IF</u> containment leakage not involved, <u>THEN</u> GO TO Step 5.</p>

(STEP 4 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 8 of 15
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

- 4 DETERMINE SITE BOUNDARY DOSE RATES  
(mrem/hr) FROM CONTAINMENT LEAKAGE: (Continued)

a) GET CHRRMS reading, R/hr

AND

Record reading on Attachment 3:

<u>Unit 1</u>	<u>Unit 2</u>
RMS-165	RMS-265
RMS-166	RMS-266

NOTE: • Main Tower Delta T is the preferred source of stability class.  
Sigma Theta (Backup Tower) is the secondary source.

- Primary source of wind speed is the Main Tower Lower Level indicator. Alternates sources are (1) Backup Tower, and (2) Main Tower Upper Level.

b) Get Stability Class and Wind Speed:

- Stability Class: \_\_\_\_\_
- Wind Speed: \_\_\_\_\_

c) Get X/Q and conversion factors from Attachment 4:

- Site Boundary X/Q for Stability Class in effect
- Monitor Conversion Factor (MCF) based on accident type
- TEDE DCF
- THY DCF

d) Record X/Q, wind speed and conversion factors on Attachment 3  
(STEP 4 CONTINUED ON NEXT PAGE)

<b>NUMBER</b> EPIP-4.08	<b>PROCEDURE TITLE</b> INITIAL OFFSITE RELEASE ASSESSMENT	<b>REVISION</b> 13 <b>PAGE</b> 9 of 15
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>4 DETERMINE SITE BOUNDARY DOSE RATES (mrem/hr) FROM CONTAINMENT LEAKAGE: (Continued)</p> <p>e) Calculate Site Boundary TEDE and THY CDE dose rates using Attachment 3</p> <p>f) Record results of Attachment 3 on to Attachment 5</p> <p>— 5 DETERMINE DOSE RATES, mrem/hr, AT 2, 5 AND 10 MILES:</p> <p>a) Use Attachment 5</p> <p>b) Add results of appropriate release pathways:</p> <ul style="list-style-type: none"> <li>• Vents - Attachment 1</li> <li>• Main Steam - Attachment 2</li> <li>• Containment - Attachment 3</li> </ul> <p>c) Determine Stability Class Correction Factor (top of Attachment 5) for distance of interest</p> <p>d) Use Attachment 5 to do calculations for TEDE and THY CDE, mrem/hr, at 2, 5 and 10 miles</p> <p>e) Report results to RAD or RAC</p>	

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13
		PAGE 10 of 15

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\_\_\_\_ 6 COMPARE SITE BOUNDARY DOSE TO  
EMERGENCY CLASSIFICATION CRITERIA:

a) Determine Site Boundary dose  
rate (sum of all pathways) from  
Attachment 5:

- TEDE: \_\_\_\_\_mrem/hr
- THY CDE: \_\_\_\_\_mrem/hr

b) Determine release duration:  
\_\_\_\_\_hours

b) Use default of 2 hours if  
duration is unknown.

c) Calculate total dose:

TEDE: \_\_\_\_\_mrem/hr x \_\_\_\_\_hours = \_\_\_\_\_mrem, TEDE

THY CDE: \_\_\_\_\_mrem/hr x \_\_\_\_\_hours = \_\_\_\_\_mrem, THY CDE

d) Compare total dose to emergency  
classification criteria:

Site Boundary Dose:	Emergency Classification:
≥ 1000 mrem TEDE or ≥ 5000 mrem Thyroid CDE	General Emergency
≥ 100 mrem TEDE or ≥ 500 mrem Thyroid CDE	Site Area Emergency

\_\_\_\_ 7 CHECK IF RESULTS INDICATE A SITE  
AREA OR GENERAL EMERGENCY EXISTS

GO TO Step 9.

<b>NUMBER</b> EPIP-4.08	<b>PROCEDURE TITLE</b> INITIAL OFFSITE RELEASE ASSESSMENT	<b>REVISION</b> 13 <b>PAGE</b> 11 of 15
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<b>STEP</b>	<b>ACTION/EXPECTED RESPONSE</b>	<b>RESPONSE NOT OBTAINED</b>
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\_\_\_\_\_ 8 INITIATE PROTECTIVE MEASURES:

- a) Use EPIP-4.07, PROTECTIVE MEASURES, to determine if any onsite or offsite protective measures are required
- b) Give the following information to the RAD/RAC:
  - Emergency Classification
  - Calculation results
  - Protective actions required by EPIP-4.07, PROTECTIVE MEASURES
- c) GO TO Step 12

\_\_\_\_\_ 9 CHECK IF EMERGENCY INVOLVES LIQUID RELEASE

GO TO Note prior to Step 11.



NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 13 of 15
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\*\*\*\*\*

CAUTION: During implementation of Design Change 99-006, Ventilation Radiation Monitoring System Replacement, the user needs to identify whether Kaman or MGPI monitor is being used (for GW-178, VG-179 and VG-180).

\*\*\*\*\*

NOTE: • Evaluation of percent technical specifications makes conservative assumptions about flow rate, isotopic mixture and detector response. Further analysis (following completion of this procedure) will be necessary to quantify release.

- Kaman (MGPI) monitors ( $\mu\text{Ci}/\text{sec}$  and  $\mu\text{Ci}/\text{cc}$ ) should be used as the primary indicator for Vent Vent and Process Vent releases. Westinghouse and NRC monitors may be used as backup.

11 DETERMINE % TECH. SPEC. FOR GASEOUS RELEASE:

- Determine monitor in alarm
- Circle appropriate monitor number on Attachment 6
- Ask SEM to position an individual to observe monitor in alarm and report increase or decrease in readings
- Get the highest reading, above background, of monitor in alarm
- Record monitor reading on Attachment 6

(STEP 11 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 14 of 15
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>11 DETERMINE % TECH. SPEC. FOR GASEOUS RELEASE: (Continued)</p> <p>f) Determine flow rate (cfm)</p> <p style="text-align: center;"><u>AND</u></p> <p>Record flow rate on Attachment 6</p> <p>g) Calculate % Tech. Spec. using Attachment 6</p> <p>h) Calculate total % Tech. Spec. for all pathways involved (Add the % Tech. Spec. for each monitor/emission channel)</p> <p>i) Compare % Tech. Spec. with emergency classification criteria:</p> <ul style="list-style-type: none"> <li>• <math>\geq 1000\%</math> - ALERT</li> <li>• <math>\geq 100\%</math> - NOUE</li> <li>• <math>&lt; 100\%</math> - Within Limits</li> </ul> <p>j) Notify SEM (through RAD or RAC) of event classification based on % Tech. Spec. for gaseous release</p>	<p>f) Use the following default flow rates:</p> <ul style="list-style-type: none"> <li>• VVA - 142,000 cfm</li> <li>• VVB - 100,000 cfm</li> <li>• PV - 310 cfm</li> <li>• CAE - 25 cfm</li> </ul>

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 13 PAGE 15 of 15
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\_\_\_\_\_ 12 TERMINATE EPIP-4.08:

- Give completed EPIP-4.08, forms, and other applicable records to the Radiological Assessment Director
- Completed by: \_\_\_\_\_

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

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

-END-

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	VENT RELEASE SITE BOUNDARY DOSE RATE	13
ATTACHMENT		PAGE
1		1 of 3

NOTE: • MGPI Normal Range Noble Gas monitors: 178-1, 179-1 and 180-1. MGPI High Range Noble Gas monitors: 178-2, 179-2 and 180-2.

- Monitor Conversion Factors (MCF) and Site Boundary X/Q are provided on Attachment 4.
- VG-174, VG-175 and GW-173 should only be used when KAMAN (MGPI) or Normal Range Monitors are offscale or inoperable.

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

VENT VENT A:

VG-104: ( CPM x CFM x MCF x X/Q ) / WINDSPEED = Value

( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

VG-179: (  $\mu$ Ci/sec x 1.0E-3 x MCF x X/Q ) / WINDSPEED = Value

(-1,-2)

( \_\_\_\_\_ x 1.0E-3 x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

VG-179: (  $\mu$ Ci/cc x CFM x 4.72E-1 x MCF x X/Q ) / WINDSPEED = Value

(-1,-2)

( \_\_\_\_\_ x \_\_\_\_\_ x 4.72E-1 x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

VG-174: ( mr/hr x CFM x MCF x X/Q ) / WINDSPEED = Value

( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

Record highest Vent Vent A value from above on Page 3 of Attachment 1.

VENT VENT B:

VG-113: ( CPM x CFM x MCF x X/Q ) / WINDSPEED = Value

( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

VG-180: (  $\mu$ Ci/sec x 1.0E-3 x MCF x X/Q ) / WINDSPEED = Value

(-1,-2)

( \_\_\_\_\_ x 1.0E-3 x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

VG-180: (  $\mu$ Ci/cc x CFM x 4.72E-1 x MCF x X/Q ) / WINDSPEED = Value

(-1,-2)

( \_\_\_\_\_ x \_\_\_\_\_ x 4.72E-1 x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

VG-175: ( mr/hr x CFM x MCF x X/Q ) / WINDSPEED = Value

( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

Record highest Vent Vent B value from above on Page 3 of Attachment 1.

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	VENT RELEASE SITE BOUNDARY DOSE RATE	13
ATTACHMENT		PAGE
1		2 of 3

NOTE: • MGPI Normal Range Noble Gas monitors: 178-1, 179-1 and 180-1. MGPI High Range Noble Gas monitors: 178-2, 179-2 and 180-2.

- Monitor Conversion Factors (MCF) and Site Boundary X/Q are provided on Attachment 4.
- VG-174, VG-175 and GW-173 should only be used when KAMAN (MGPI) or Normal Range Monitors are offscale or inoperable.

PROCESS VENT:

GW-102: ( CPM x CFM x MCF x X/Q ) / WINDSPEED = Value  
 ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

GW-178: (  $\mu$ Ci/sec x 1.0E-3 x MCF x X/Q ) / WINDSPEED = Value  
 (-1,-2) ( \_\_\_\_\_ x 1.0E-3 x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

GW-178: (  $\mu$ Ci/cc x CFM x 4.72E-1 x MCF x X/Q ) / WINDSPEED = Value  
 (-1,-2) ( \_\_\_\_\_ x \_\_\_\_\_ x 4.72E-1 x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

GW-173: ( mr/hr x CFM x MCF x X/Q ) / WINDSPEED = Value  
 ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

Record highest Process Vent value from above on Page 3 of Attachment 1.

AIR EJECTOR:

SV-121: ( CPM x CFM x MCF x X/Q ) / WINDSPEED = Value  
 ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

SV-221: ( CPM x CFM x MCF x X/Q ) / WINDSPEED = Value  
 ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

TOTAL OF AIR EJECTORS = \_\_\_\_\_

Record sum of Air Ejector values on Page 3 of Attachment 1.

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	VENT RELEASE SITE BOUNDARY DOSE RATE	13
ATTACHMENT		PAGE
1		3 of 3

- \_\_\_ 1. Record the following monitor values in left-hand column of table below:
- Highest Vent Vent A value from Attachment 1 Page 1
  - Highest Vent Vent B value from Attachment 1 Page 1
  - Highest Process Vent value from Attachment 1 Page 2
  - Sum of Air Ejector values from Attachment 1 Page 2
- \_\_\_ 2. Record TEDE and THY CDE Dose Conversion Factors (DCFs) from Attachment 4 in middle and right-hand columns in table below.
- \_\_\_ 3. Multiply monitor values in left-hand column by TEDE DCF and THY CDE DCF atop middle and right-hand columns in table below. Record result(s) in intersecting space.
- \_\_\_ 4. Add resulting values in middle and right-hand columns to calculate Total Vent Release (TEDE and THY CDE).

	TEDE DCF from Attachment 4	THY CDE DCF from Attachment 4
HIGHEST VENT VENT A VALUE		
HIGHEST VENT VENT B VALUE		
HIGHEST PROCESS VENT VALUE		
SUM OF AIR EJECTOR VALUES		
SUM OF VENT VENT, PROCESS VENT AND AIR EJECTORS	TEDE mrem/hr	THY CDE mrem/hr

Completed by: \_\_\_\_\_

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

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	MAIN STEAM RELEASE - SITE BOUNDARY DOSE RATE	13
ATTACHMENT		PAGE
2		1 of 2

NOTE: Monitor Conversion Factors (MCF) and Site Boundary X/Q are provided on Attachment 4.

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

UNIT 1 MAIN STEAM:

( mr/hr x # Valves x MCF x X/Q ) / WINDSPEED = Value

MS-170: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

MS-171: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

MS-172: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

TOTAL OF UNIT 1 MAIN STEAM = \_\_\_\_\_

UNIT 1 AFWPT:

( mr/hr x MCF x X/Q ) / WINDSPEED = Value

MS-176: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

UNIT 2 MAIN STEAM:

( mr/hr x # Valves x MCF x X/Q ) / WINDSPEED = Value

MS-270: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

MS-271: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

MS-272: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

TOTAL OF UNIT 2 MAIN STEAM = \_\_\_\_\_

UNIT 2 AFWPT:

( mr/hr x MCF x X/Q ) / WINDSPEED = Value

MS-276: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	MAIN STEAM RELEASE - SITE BOUNDARY DOSE RATE	13
ATTACHMENT		PAGE
2		2 of 2

- 1. Record the following monitor values in left-hand column of table below:
- Total Main Steam value for affected unit
  - AFWPT value for affected unit
- 2. Record TEDE and THY CDE Dose Conversion Factors (DCFs) from Attachment 4 in middle and right-hand columns in table below.
- 3. Multiply monitor values in left-hand column by TEDE DCF and THY CDE DCF atop middle and right-hand columns in table below. Record result(s) in intersecting space.
- 4. Add resulting values in middle and right-hand columns to calculate Total Main Steam Release (TEDE and THY CDE) (sum of Main Steam and AFWPT).

	TEDE DCF from Attachment 4	THY CDE DCF from Attachment 4
TOTAL OF MAIN STEAM VALUES		
AFWPT VALUE		
SUM OF AFFECTED UNIT(S) MAIN STEAM AND AFWPT	TEDE mrem/hr	THY CDE mrem/hr

Completed by: \_\_\_\_\_

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

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	CONTAINMENT RELEASE - SITE BOUNDARY DOSE RATE	13
ATTACHMENT		PAGE
3		1 of 1

NOTE: • Monitor Conversion Factors (MCF), Site Boundary X/Q, TEDE Dose Conversion Factors (TEDE DCF) and Thyroid CDE Factors (THY DCF) are provided on Attachment 4.

- The CHRMS Monitor Conversion Factor is calculated for design leak rate of 0.1% per day.

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

CONTAINMENT:

( R/hr x MCF x X/Q ) / WINDSPEED = Value

RMS-165

RMS-166

RMS-265

RMS-266: ( \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ ) / \_\_\_\_\_ = \_\_\_\_\_

1. Record result of calculation above in left-hand column of table below.
2. Record TEDE and THY CDE Dose Conversion Factors (DCFs) from Attachment 4 in middle and right-hand columns in table below.
3. Multiply monitor value in left-hand column by TEDE DCF and THY CDE DCF atop middle and right-hand columns in table below. Record result(s) in intersecting space (Total Containment Release (TEDE and THY CDE)).

	TEDE DCF from Attachment 4	THY CDE DCF from Attachment 4
CONTAINMENT VALUE	TEDE mrem/hr	THY CDE mrem/hr

Completed by: \_\_\_\_\_

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

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	MONITOR CONVERSION FACTORS, SITE BOUNDARY X/Q VALUES, TEDE FACTORS, AND THYROID CDE FACTORS	13
ATTACHMENT		PAGE
4		1 of 2

NOTE: Kaman and MGPI Monitor Conversion Factors are provided for use during implementation of Design Change 99-006, Ventilation Radiation Monitoring System Replacement.

MONITOR CONVERSION FACTORS (MCF) for Vent Release (Attachment 1):

MONITOR	MSLB	SGTR	FHA	WGDT	VCT	LOCA MELT	LOCA GAP	LOCA PC	NORMAL
VG-104	9.7E-8	7.0E-8	-----	-----	-----	-----	-----	-----	4.7E-8
VG-174	2.4E+1	1.8E+1	-----	-----	-----	-----	-----	-----	1.1E+1
VG-179-1 (KAMAN)	9.7E-1	9.6E-1	-----	-----	-----	-----	-----	-----	9.5E-1
VG-179-1 (MGPI)	8.8E-1	8.6E-1	-----	-----	-----	-----	-----	-----	8.1E-1
VG-179-2 (KAMAN)	8.3E-1	7.4E-1	-----	-----	-----	-----	-----	-----	5.9E-1
VG-179-2 (MGPI)	1.0E+0	1.0E+0	-----	-----	-----	-----	-----	-----	1.1E+0
VG-113	-----	-----	1.4E-8	-----	-----	4.0E-8	4.3E-8	1.9E-8	1.4E-8
VG-175	-----	-----	5.9E+1	-----	-----	1.8E+0	1.7E+0	4.1E+0	5.8E+1
VG-180-1 (KAMAN)	-----	-----	9.8E-1	-----	-----	1.7E+0	-----	1.2E+0	9.8E-1
VG-180-1 (MGPI)	-----	-----	9.2E-1	-----	-----	7.9E-1	8.2E-1	8.5E-1	9.2E-1
VG-180-2 (KAMAN)	-----	-----	1.0E+0	-----	-----	1.8E-1	-----	3.6E-1	1.0E+0
VG-180-2 (MGPI)	-----	-----	1.0E+0	-----	-----	7.3E+0	6.8E+0	1.5E+0	1.0E+0
GW-102	-----	-----	-----	6.1E-8	1.1E-7	-----	-----	-----	2.3E-7
GW-173	-----	-----	-----	5.0E+1	2.3E+1	-----	-----	-----	2.7E+1
GW-178-1 (KAMAN)	-----	-----	-----	9.1E-1	9.8E-1	-----	-----	-----	1.0E+0
GW-178-1 (MGPI)	-----	-----	-----	7.7E-1	9.0E-1	-----	-----	-----	9.3E-1
GW-178-2 (KAMAN)	-----	-----	-----	1.1E+0	8.1E-1	-----	-----	-----	8.9E-1
GW-178-2 (MGPI)	-----	-----	-----	1.1E+0	1.0E+0	-----	-----	-----	1.1E+0
SV-121,-221	3.1E-4	2.2E-4	-----	-----	-----	-----	-----	-----	1.4E-4

(CONTINUED ON NEXT PAGE)

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	MONITOR CONVERSION FACTORS, SITE BOUNDARY X/Q VALUES, TEDE FACTORS, AND THYROID CDE FACTORS	13
ATTACHMENT		PAGE
4		2 of 2

MONITOR CONVERSION FACTORS (MCF) for Main Steam Release (Attachment 2):

MONITOR	MSLB	SGTR	LKD. ROTOR	NORMAL
MS-1(2)70 MS-1(2)71 MS-1(2)72	5.3E+3	6.9E+3	3.9E+2	5.7E+3
MS-176	1.9E+3	4.2E+3	4.3E+2	3.5E+3
MS-276	2.6E+3	5.7E+3	5.6E+2	4.6E+3

MONITOR CONVERSION FACTORS (MCF) for Containment Release (Attachment 3):

MONITOR	LOCA MELT	LOCA GAP	LOCA PC	NORMAL
RMS-1(2)65 RMS-1(2)66	6.6E-2	6.3E-2	1.0E-1	1.7E-1

X/Q, SITE BOUNDARY:

STABILITY CLASS

A	B	C	D	E	F	G
1.84 E-6	1.65 E-5	5.98 E-5	1.77 E-4	3.46 E-4	7.26 E-4	1.40 E-3

TEDE DOSE CONVERSION FACTORS (TEDE DCF):

MSLB	SGTR	FHA	WGDT	VCT	LOCA MELT	LOCA GAP	LOCA PC	LKD. ROTOR
6.1E+3	1.8E+2	3.2E+1	2.0E+1	3.3E+1	1.7E+3	4.7E+2	2.9E+2	7.2E+3

THYROID CDE DOSE CONVERSION FACTORS (THY DCF):

	MSLB	SGTR	FHA	WGDT	LOCA MELT	LOCA GAP	LOCA PC	LKD. ROTOR
UNFILTERED	2.6E+4	1.5E+1	7.1E-1	2.5E-5	1.6E+4	4.3E+2	2.4E+2	3.7E+4
FILTERED	7.1E+1	1.5E-1	7.1E-2	2.5E-6	1.6E+3	4.3E+1	2.4E+1	-----

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	DETERMINATION OF 2, 5 AND 10 MILE DOSE RATES	13
ATTACHMENT		PAGE
5		1 of 1

# STABILITY CLASS CORRECTION FACTOR

MILES	A	B	C	D	E	F	G
2	0.359	0.109	0.234	0.271	0.289	0.331	0.414
5	0.158	0.023	0.0484	0.0678	0.0838	0.0964	0.136
10	0.0815	0.0121	0.0154	0.0249	0.0347	0.0399	0.0564

## CALCULATION:

<p>SUM OF TEDE:</p> <p>ATT. 1: _____</p> <p>ATT. 2: _____</p> <p>ATT. 3: _____</p> <p>SUM: _____</p>	x	CORRECTION FACTOR 2 miles:	=	TEDE mrem/hr 2 miles:
		CORRECTION FACTOR 5 miles:	=	TEDE mrem/hr 5 miles:
		CORRECTION FACTOR 10 miles:	=	TEDE mrem/hr 10 miles:

<p>SUM OF THY CDE:</p> <p>ATT. 1: _____</p> <p>ATT. 2: _____</p> <p>ATT. 3: _____</p> <p>SUM: _____</p>	x	CORRECTION FACTOR 2 miles:	=	THY CDE mrem/hr 2 miles:
		CORRECTION FACTOR 5 miles:	=	THY CDE mrem/hr 5 miles:
		CORRECTION FACTOR 10 miles:	=	THY CDE mrem/hr 10 miles:

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.08	% TECHNICAL SPECIFICATION WORKSHEET	13
ATTACHMENT		PAGE
6		1 of 1

NOTE: • Percent TS should be calculated for all affected release pathways.

- MGPI Normal Range Noble Gas monitors: 178-1, 179-1 and 180-1. MGPI High Range Noble Gas monitors: 178-2, 179-2 and 180-2.

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

% TECH. SPEC.

VENT VENT A:

	CPM	x	CFM	x	CF	=	% TS	
VG-104:	_____	x	_____	x	2.35 E-7	=	_____	Highest % TS
	μCi/sec	x	CF			=	% TS	
VG-179-1:	_____	x	5.46 E-4			=	_____	
	μCi/cc	x	CFM		CF	=	% TS	
VG-179-1:	_____	x	_____	x	2.58 E-1	=	_____	

VENT VENT B:

	CPM	x	CFM	x	CF	=	% TS	
VG-113:	_____	x	_____	x	9.54 E-9	=	_____	Highest % TS
	μCi/sec	x	CF			=	% TS	
VG-180-1:	_____	x	5.46 E-4			=	_____	
	μCi/cc	x	CFM		CF	=	% TS	
VG-180-1:	_____	x	_____	x	2.58 E-1	=	_____	

PROCESS VENT:

	CPM	x	CFM	x	CF	=	% TS	
GW-102:	_____	x	_____	x	3.03 E-8	=	_____	Highest % TS
	μCi/sec	x	CF			=	% TS	
GW-178-1:	_____	x	5.06 E-5			=	_____	
	μCi/cc	x	CFM		CF	=	% TS	
GW-178-1:	_____	x	_____	x	2.39 E-2	=	_____	

AIR EJECTOR MONITORS:

	CPM	x	CFM	x	CF	=	% TS	
SV-121:	_____	x	_____	x	6.4 E-4	=	_____	
	CPM	x	CFM	x	CF	=	% TS	
SV-221:	_____	x	_____	x	6.4 E-4	=	_____	

Completed by: \_\_\_\_\_  
Date/Time: \_\_\_\_\_ / \_\_\_\_\_

TOTAL % TECH. SPECS.: \_\_\_\_\_

VIRGINIA POWER  
NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT  (With 6 Attachments)	REVISION 12
		PAGE 1 of 11

PURPOSE

Provide guidance and data to Dose Assessment Team to more accurately predict offsite releases.

**LEVEL 2 DISTRIBUTION**  
This Document Should Be Verified  
And Annotated To A Controlled Source  
As Required to Perform Work

ENTRY CONDITIONS

Any of the following:

1. Entry from EPIP-4.01, RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE.
2. Entry from EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE.

Approvals on File

Effective Date

9/13/01

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 2 of 11
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\_\_\_\_ 1 INITIATE PROCEDURE:

- By: \_\_\_\_\_
- Date: \_\_\_\_\_
- Time: \_\_\_\_\_

NOTE: • Source term is expressed in Ci/sec.

- Source term calculations derived from monitor readings should be used only for initial assessment and to establish trends. Sampling should also be performed to more accurately determine the source term.
- Source term derived from Containment High Range Monitors or Containment sampling is used for analysis following a LOCA.

\_\_\_\_ 2 DETERMINE METHOD FOR SOURCE TERM CALCULATION:

- Station Monitors - GO TO Step 3
- Sample Effluent - GO TO Step 4
- Sample of Station Inventory - GO TO Step 7
- Containment High Range Monitor (Inner Crane Wall) - GO TO Step 8
- Sample of Containment Air - GO TO Step 9

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 3 of 11
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

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CAUTION: During implementation of Design Change 99-006, Ventilation Radiation Monitoring System Replacement, the user needs to identify whether Kaman or MGPI monitor is being used (for GW-178, VG-179 and VG-180).

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- NOTE:
- MGPI Normal Range Noble Gas monitors: 178-1, 179-1 and 180-1.  
MGPI High Range Noble Gas monitors: 178-2, 179-2 and 180-2.
  - Should Vent Vent or Process Vent Normal Range monitors be inoperable or offscale, assessments should continue using High Range and/or Kaman (MGPI) monitors.
  - The Condenser Air Ejector may be diverted to containment.

3 DETERMINE SOURCE TERM FROM STATION MONITORS:

- a) Get monitor readings and effluent flow rates (cfm) for release pathways of concern:
- Vent Vent A: VG-104, VG-179, VG-174
  - Vent Vent B: VG-113, VG-180, VG-175
  - Process Vent: GW-102, GW-178, GW-173
  - Condenser Air Ejector: SV-121, SV-221
  - Main Steam: MS-170, MS-171, MS-172, MS-270, MS-271, MS-272
  - AFWPT: MS-176, MS-276
- a) IF monitor readings NOT available, THEN GO TO Step 4.

(STEP 3 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 4 of 11
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3 DETERMINE SOURCE TERM FROM STATION MONITORS: (Continued)

b) Record the following information on Attachment 1:

- Date
- Time
- Flow rate (when applicable) and monitor reading for pathway(s) of concern:

Normal Range: cpm (use NET cpm: Gross - Background)  
Kaman (MGPI):  $\mu\text{Ci/sec}$  or  $\mu\text{Ci/cc}$   
High Range: mR/hr

- c) Determine accident type
- d) Determine status of effluent charcoal filtration
- e) Determine Monitor Conversion Factors (MCF) and Iodine Conversion Factors (Iodine CF) using Attachment 2
- f) Record conversion factors on Attachment 1
- g) Use Attachment 1 to calculate Iodine and Noble Gas release rates, Ci/sec
- h) Add Ci/sec for all pathways of concern

AND

Record results at end of Attachment 1

- i) Give results to RAD or RAC

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 5 of 11
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

- NOTE:
- In the event that a release involves multiple pathways, Step 4 should be repeated for each pathway. Results of each analysis are then added to determine the total source term.
  - The Condenser Air Ejector may be diverted to containment, eliminating need to assess source term.

\_\_\_\_\_ 4 DETERMINE SOURCE TERM FROM EFFLUENT SAMPLE:

- |  |   |
|--|---|
| <p>a) Ask Radiation Protection Supervisor to initiate EPIP-4.24, GASEOUS EFFLUENT SAMPLING DURING AN EMERGENCY, for sample of appropriate pathway:</p> <ul style="list-style-type: none"> <li>• Vent Vent A</li> <li>• Vent Vent B</li> <li>• Process Vent</li> <li>• Condenser Air Ejector</li> </ul> <p>b) Get monitor reading:</p> <ul style="list-style-type: none"> <li>• Maximum: _____</li> <li>• Reading at time of sample: _____</li> </ul> <p>c) Have Count Room analyze sample:</p> <ul style="list-style-type: none"> <li>• Request initiation of EPIP-4.26, HIGH LEVEL ACTIVITY SAMPLE ANALYSIS, for high activity samples</li> </ul> | <p>a) <u>IF</u> source term determination from effluent sample <u>NOT</u> required, <u>THEN</u> GO TO Step 7.</p> |
|--|---|

(STEP 4 CONTINUED ON NEXT PAGE)

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 6 of 11
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED															
4	DETERMINE SOURCE TERM FROM EFFLUENT SAMPLE: (Continued)																
	d) Record nuclide activity on Attachment 3, left column																
	<u>AND</u>																
	Add results to determine Noble Gas and Iodine gross activity, μCi/ml																
	e) Check if this is an initial source term assessment	e) GO TO Step 4.g.															
	f) Check if sample taken at maximum monitor reading	f) IF sample <u>NOT</u> taken at maximum monitor reading, <u>THEN</u> do the following:															
		1) Determine corrected μCi/cc for gross Noble Gas and for Iodine:															
		<table border="1"> <tr> <td>MAX READING</td> <td>x</td> <td>μCi</td> <td>=</td> <td>CORRECTED</td> </tr> <tr> <td>READING AT</td> <td></td> <td>cc</td> <td></td> <td>μCi/cc</td> </tr> <tr> <td>TIME OF SAMPLE</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	MAX READING	x	μCi	=	CORRECTED	READING AT		cc		μCi/cc	TIME OF SAMPLE				
MAX READING	x	μCi	=	CORRECTED													
READING AT		cc		μCi/cc													
TIME OF SAMPLE																	
		2) Record results on Attachment 4.															
		3) GO TO Step 4.h.															
	g) Get Noble Gas activity from Attachment 3 and record activity on to Attachment 4																
	h) Get effluent flow rate (cfm)																
	i) Record cfm on Attachment 4																
	j) Record Iodine activity on to Attachment 4																
	(STEP 4 CONTINUED ON NEXT PAGE)																

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 7 of 11
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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4 DETERMINE SOURCE TERM FROM  
EFFLUENT SAMPLE: (Continued)

k) Use Attachment 4 to calculate  
Noble Gas and Iodine source  
term (Ci/sec)

l) Add Ci/sec for applicable  
pathways at end of Attachment 4

5 DETERMINE DDE, TEDE AND THYROID  
CDE DOSE CONVERSION FACTORS BASED  
ON SAMPLE RESULTS:

a) Use Attachment 3 that was  
previously filled out for gross  
activity determination

a) Do Steps 4.a through 4.d

AND

GO TO Step 5.b.

b) Do calculations on Attachment 3  
to determine the following  
conversion factors:

- DDE
- TEDE
- THY CDE

c) Determine TEDE/DDE ratio:

$$\frac{\text{TEDE}}{\text{DDE}} = \text{Ratio TEDE/DDE}$$

d) Give source term results,  
Ci/sec, and TEDE/DDE ratio to  
RAD or RAC

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 8 of 11
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6	<p>DETERMINE SITE BOUNDARY DOSE RATES BASED ON EFFLUENT SAMPLE RESULTS:</p> <p>a) Ask RAD or RAC if Site Boundary dose rate calculation based on effluent sample - DESIRED</p> <p>b) Record TEDE and THY CDE DCFs from bottom of Attachment 3 on to Attachment 5:</p> <ul style="list-style-type: none"> <li>Record on calculation line for each affected pathway</li> </ul> <p>c) Get effluent flow rate (cfm) for each affected pathway</p> <p>d) Record CFM on Attachment 5</p> <p><u>NOTE:</u></p> <ul style="list-style-type: none"> <li>Main Tower Delta T is the preferred source of stability class. Sigma Theta (Backup Tower) is the secondary source.</li> <li>Primary source of wind speed is the Main Tower Lower Level indicator. Alternates sources are (1) Backup Tower, and (2) Main Tower Upper Level.</li> </ul> <p>e) Determine Stability Class and wind speed:</p> <ul style="list-style-type: none"> <li>Ask RAD or RAC</li> </ul> <p>f) Use Attachment 5 Site Boundary X/Q value for appropriate Stability Class and divide by wind speed</p> <p>g) Record corrected X/Q value on calculation line for each affected pathway</p> <p>h) Do calculations to determine Site Boundary TEDE and THY CDE dose rate, mrem/hr</p> <p>i) Give results to RAD or RAC</p>	<p>a) GO TO Step 7.</p>

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 9 of 11
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

7 DETERMINE SOURCE TERM FROM STATION INVENTORY:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>a) Check if release originated from a gas storage tank (ie. Waste Gas Decay Tank, Volume Control Tank, etc.)</li> <li>b) Have tank sampled</li> <li>c) Ask Dose Assessment Team Leader to get information on volume of release from Emergency Technical Director</li> <li>d) Get sample activity results, <math>\mu\text{Ci/ml}</math>, for total of Noble Gas and Iodine: <ul style="list-style-type: none"> <li>• Use Count Room results or completed Attachment 3</li> </ul> </li> <li>e) Record the following on Attachment 4: <ul style="list-style-type: none"> <li>• Noble Gas activity</li> <li>• Iodine activity</li> <li>• Volume of release, ml</li> <li>• Duration of release, sec</li> </ul> </li> <li>f) Use Attachment 4, Station Inventory section, to determine Noble Gas and Iodine release rate, Ci/sec</li> <li>g) Give results to RAD or RAC</li> </ul> | <ul style="list-style-type: none"> <li>a) GO TO Step 8.</li> </ul> |
|---|--|

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 10 of 11
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8	<p>DETERMINE SOURCE TERM FROM CONTAINMENT HIGH RANGE MONITOR (INNER CRANE WALL):</p> <p>a) Check if LOCA conditions exist</p> <p>b) Get dose rate (R/hr) from Containment High Range Monitor (Inner Crane Wall) of affected unit:</p> <ul style="list-style-type: none"> <li>• RMS-165 (-265): _____</li> <li>• RMS-166 (-266): _____</li> </ul> <p>c) Determine length of time (hours) since unit shutdown</p> <p>d) Use Attachment 6 to estimate Curies Noble Gas (Ci NG) and Curies Iodine (Halogens) available for release</p> <p>e) Calculate release rate:</p> <p>_____ Ci Noble Gas x 4.35E-8 = _____ Ci/Sec Noble Gas</p> <p>_____ Ci Iodine x 4.35E-8 = _____ Ci/sec Iodine</p> <p>f) Give results to RAD or RAC</p>	<p>a) GO TO Step 10.</p>

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 12 PAGE 11 of 11
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\_\_\_\_\_ 9 DETERMINE SOURCE TERM FROM  
CONTAINMENT AIR SAMPLE:

- |   |                          |
|---|--------------------------|
| <p>a) Check if LOCA conditions exist</p> <p>b) Ask RPS to activate EPIP-4.22,<br/>POST ACCIDENT SAMPLING OF<br/>CONTAINMENT AIR</p> <p>c) Record sample results (nuclide<br/>concentration) on Attachment 3,<br/>left column</p> <p>d) Determine gross activity,<br/><math>\mu\text{Ci/ml}</math>, for Noble Gas and Iodine</p> <p>e) Calculate release rates:<br/><br/><math>\mu\text{Ci/ml} \times 2.25\text{E}+3 \times 1.0\text{E}-6 = \text{Ci/Sec}</math></p> <p>f) Record results:<br/>                     _____Ci/sec Noble Gas<br/>                     _____Ci/sec Iodine</p> <p>g) Give results to RAD or RAC</p> | <p>a) GO TO Step 10.</p> |
|---|--------------------------|

\_\_\_\_\_ 10 TERMINATE EPIP-4.09:

- Give completed EPIP-4.09, forms,  
and other applicable records to  
the Radiological Assessment  
Director
- Completed by: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

-END-

AIR EJECTOR:

CPM      x      MCF      x      CFM      =      Ci/sec

SV-121: \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ =

CPM      x      MCF      x      CFM      =      Ci/sec

SV-221: \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ =

SUM Ci/sec

IODINE CF (Att. 2): x = Ci/sec Iod.

MINUS

Ci/sec NG

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	MONITOR Ci/sec WORKSHEET	12
ATTACHMENT		PAGE
1		2 of 2

PROCESS VENT:

	CPM	x	MCF	x	CFM	=	Ci/sec		IODINE Ci/sec	NOBLE GAS Ci/sec
GW-102:	_____	x	_____	x	_____	=	_____	Highest Ci/sec	MINUS	Ci/sec NG
	_____	x	_____	x	_____	=	_____			
GW-178:	μCi/sec	x	MCF	x	1.00E-6	=	Ci/sec	X	Ci/sec Iod.	
(-1,-2)	_____	x	_____	x	1.00E-6	=	_____			
GW-178:	μCi/cc	x	MCF	x	CFM	x	4.72E-4	=		
(-1,-2)	_____	x	_____	x	_____	x	4.72E-4			
	mR/hr	x	MCF	x	CFM	=	Ci/sec	IODINE CF (Att. 2):	MINUS	Ci/sec NG
GW-173:	_____	x	_____	x	_____	=	_____			

MAIN STEAM:

	mR/hr	x	# valves	MCF	=	Ci/sec		SUM OF Ci/sec		IODINE CF (Att. 2):	MINUS	Ci/sec Iod.		Ci/sec NG
MS-170:	_____	x	_____	x	_____	=	_____	X			MINUS	Ci/sec Iod.		Ci/sec NG
MS-171:	_____	x	_____	x	_____	=	_____							
MS-172:	_____	x	_____	x	_____	=	_____	X			MINUS	Ci/sec Iod.		Ci/sec NG
MS-270:	_____	x	_____	x	_____	=	_____							
MS-271:	_____	x	_____	x	_____	=	_____	X			MINUS	Ci/sec Iod.		Ci/sec NG
MS-272:	_____	x	_____	x	_____	=	_____							

AFWPT:

	mR/hr	x	MCF	=	Ci/sec		Highest Ci/sec		IODINE CF (Att. 2):	MINUS	Ci/sec Iod.		Ci/sec NG
MS-176:	_____	x	_____	=	_____					MINUS	Ci/sec Iod.		Ci/sec NG
MS-276:	_____	x	_____	=	_____								

TOTAL Curies/sec: Sum above results for Iodine and for Noble gas (separately).

Completed by: \_\_\_\_\_

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

TOTAL  
Ci/sec IOD

TOTAL  
Ci/sec NG

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	MONITOR CONVERSION FACTORS AND IODINE CONVERSION FACTORS	12
ATTACHMENT		PAGE
2		1 of 2

NOTE: Kaman and MGPI Monitor Conversion Factors are provided for use during implementation of Design Change 99-006, Ventilation Radiation Monitoring System Replacement.

MONITOR CONVERSION FACTORS (MCF) for Vent Vent A:

MONITOR	MSLB	SGTR	NORMAL
VG-104	9.7E-11	7.0E-11	4.7E-11
VG-174	2.4E-2	1.8E-2	1.1E-2
VG-179-1 (KAMAN)	9.7E-4	9.6E-4	9.5E-4
VG-179-1 (MGPI)	8.8E-4	8.6E-4	8.1E-4
VG-179-2 (KAMAN)	8.3E-4	7.4E-4	5.9E-4
VG-179-2 (MGPI)	1.0E-3	1.0E-3	1.1E-3

MONITOR CONVERSION FACTORS (MCF) for Vent Vent B:

MONITOR	FHA	LOCA MELT	LOCA GAP	LOCA PC	NORMAL
VG-113	1.4E-11	4.0E-11	4.3E-11	1.9E-11	1.4E-11
VG-175	5.9E-2	1.8E-3	1.7E-3	4.1E-3	5.8E-2
VG-180-1 (KAMAN)	9.8E-4	1.7E-3	-----	1.2E-3	9.8E-4
VG-180-1 (MGPI)	9.2E-4	7.9E-4	8.2E-4	8.5E-4	9.2E-4
VG-180-2 (KAMAN)	1.0E-3	1.8E-4	-----	3.6E-4	1.0E-3
VG-180-2 (MGPI)	1.0E-3	7.3E-3	6.8E-3	1.5E-3	1.0E-3

MONITOR CONVERSION FACTORS (MCF) for Air Ejector:

MONITOR	MSLB	SGTR	NORMAL
SV-121,-221	3.1E-7	2.2E-7	1.4E-7

(CONTINUED ON NEXT PAGE)

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	MONITOR CONVERSION FACTORS AND IODINE CONVERSION FACTORS	12
ATTACHMENT		PAGE
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MONITOR CONVERSION FACTORS (MCF) for Process Vent:

MONITOR	WGDT	VCT	NORMAL
GW-102	6.1E-11	1.1E-10	2.3E-10
GW-173	5.0E-2	2.3E-2	2.7E-2
GW-178-1 (KAMAN)	9.1E-4	9.8E-4	1.0E-3
GW-178-1 (MGPI)	7.7E-4	9.0E-4	9.3E-4
GW-178-2 (KAMAN)	1.1E-3	8.1E-4	8.9E-4
GW-178-2 (MGPI)	1.1E-3	1.0E-3	1.1E-3

MONITOR CONVERSION FACTOR (MCF) for Main Steam:

MONITOR	MSLB	SGTR	LKD. ROTOR	NORMAL
MS-1(2)70 MS-1(2)71 MS-1(2)72	5.3E+0	6.9E+0	3.9E-1	5.7E+0

MONITOR CONVERSION FACTORS (MCF) for AFWPT:

MONITOR	LOCA MELT	LOCA GAP	LOCA PC	NORMAL
MS-176	1.9E+0	4.2E+0	4.3E-1	3.5E+0
MS-276	2.6E+0	5.7E+0	5.6E-1	4.6E+0

IODINE CONVERSION FACTORS (ICF):

	MSLB	SGTR	FHA	WGDT	LOCA MELT	LOCA GAP	LOCA PC	LKD. ROTOR
UNFILTERED	2.0E-1	5.1E-3	2.4E-3	1.8E-5	5.4E-1	8.8E-2	6.2E-2	2.6E-1
FILTERED	5.4E-4	5.2E-5	2.4E-4	1.8E-6	5.4E-2	8.8E-3	6.2E-3	-----

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	NOBLE GAS, IODINE AND DOSE CONVERSION FACTOR WORKSHEET	12
ATTACHMENT	USING SAMPLE ANALYSIS RESULTS	PAGE
3		1 of 1

Sample Identification: \_\_\_\_\_; Sample Time: \_\_\_\_\_

NOTE: • Total Noble Gas and Iodine activity,  $\mu\text{Ci/ml}$ , are for use on Attachment 4.

• Adjusted DDE, TEDE and THY CDE are for use on Attachment 5.

NUCLIDE	ACTIV. $\mu\text{Ci/ml}$	EPA DDE DCF	SAMPLE DDE	EPA TEDE DCF	SAMPLE TEDE	EPA THY CDE DCF	SAMPLE THY CDE
---------	-----------------------------	-------------------	---------------	--------------------	----------------	-----------------------	-------------------

Kr-83M	_____	NA					
Kr-85	_____	x 1.3	= _____	x 1	= _____		
Kr-85M	_____	x 93	= _____	x 1	= _____		
Kr-87	_____	x 510	= _____	x 1	= _____		
Kr-88	_____	x 1300	= _____	x 1	= _____		
Kr-89	_____	x 1200	= _____	x 1	= _____		
Xe-131M	_____	x 4.9	= _____	x 1	= _____		
Xe-133	_____	x 20	= _____	x 1	= _____		
Xe-133M	_____	x 17	= _____	x 1	= _____		
Xe-135	_____	x 140	= _____	x 1	= _____		
Xe-135M	_____	x 250	= _____	x 1	= _____		
Xe-137	_____	x 110	= _____	x 1	= _____		
Xe-138	_____	x 710	= _____	x 1	= _____		

TOTAL NOBLE  
GAS,  $\mu\text{Ci/ml}$ : \_\_\_\_\_

CONTINUE  
ADDING  
DOWN

CONTINUE  
ADDING  
DOWN

I-125	_____	x 6.3	= _____	x 4762	= _____	x 32	= _____
I-129	_____	x 4.8	= _____	x 43750	= _____	x 33	= _____
I-131	_____	x 220	= _____	x 241	= _____	x 24.5	= _____
I-132	_____	x 1400	= _____	x 3.5	= _____	x 1.6	= _____
I-133	_____	x 350	= _____	x 43	= _____	x 14.6	= _____
I-134	_____	x 1600	= _____	x 1.9	= _____	x 0.43	= _____
I-135	_____	x 950	= _____	x 8.5	= _____	x 4.7	= _____

TOTAL IODINE,  
 $\mu\text{Ci/ml}$ : \_\_\_\_\_

DDE DCF: \_\_\_\_\_

TEDE DCF: \_\_\_\_\_

THY. CDE DCF: \_\_\_\_\_

Completed by: \_\_\_\_\_  
Date/Time: \_\_\_\_\_ / \_\_\_\_\_

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	SAMPLE EFFLUENT Ci/sec WORKSHEET	12
ATTACHMENT		PAGE
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MONITOR	$\mu\text{Ci/ml}$		CFM			Ci/sec	
						NOBLE GAS	IODINE
<u>VV A:</u>	N.G.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
	IOD.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
<u>VV B:</u>	N.G.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
	IOD.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
<u>PV:</u>	N.G.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
	IOD.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
<u>AIR EJECTOR #1:</u>							
	N.G.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
	IOD.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
<u>AIR EJECTOR #2:</u>							
	N.G.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
	IOD.	x	CFM	x	4.72E-4	=	
		x		x	4.72E-4		
<u>STATION INVENTORY:</u>							
	N.G.	x	VOLUME (mls)	x	1.0E-6 / SECONDS	=	
		x		x	1.0E-6 /		
	IOD.	x	VOLUME (mls)	x	1.0E-6 / SECONDS	=	
		x		x	1.0E-6 /		
SUM Ci/sec:						NG	IOD

Completed by: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	SAMPLE EFFLUENT SITE BOUNDARY DOSE RATE WORKSHEET	12
ATTACHMENT		PAGE
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NOTE: TEDE and Thyroid CDE factors from Attachment 3 are to be applied to this worksheet.

X/Q, SITE BOUNDARY:

STABILITY CLASS

A	B	C	D	E	F	G
<u>1.84E-6</u> Windspeed	<u>1.65E-5</u> Windspeed	<u>5.98E-5</u> Windspeed	<u>1.77E-4</u> Windspeed	<u>3.46E-4</u> Windspeed	<u>7.26E-4</u> Windspeed	<u>1.40E-3</u> Windspeed

MONITOR	TEDE DCF OR THY CDE DCF	CFM		X/Q WINDSPEED	TEDE mrem/hr	THY. CDE mrem/hr
<u>VV A:</u>	TEDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
	THY CDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
<u>VV B:</u>	TEDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
	THY CDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
<u>PV:</u>	TEDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
	THY CDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
<u>AIR EJECTOR #1:</u>	TEDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
	THY CDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
<u>AIR EJECTOR #2:</u>	TEDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
	THY CDE	x	CFM	x 4.72E-1 x X/Q/WINDSPEED	=	
		x		x 4.72E-1 x		
<u>STATION INVENTORY:</u>	TEDE	x	VOLUME (mls)	x 1.0E-3 / SECONDS x X/Q/WINDSP.	=	
		x		x 1.0E-3 / x		
	THY CDE	x	VOLUME (mls)	x 1.0E-3 / SECONDS x X/Q/WINDSP.	=	
		x		x 1.0E-3 / x		

Completed by: \_\_\_\_\_

SUM mrem/hr: \_\_\_\_\_ TEDE \_\_\_\_\_ THY CDE \_\_\_\_\_

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

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	MATRIX:	12
ATTACHMENT	CHRRMS - EVENT - AVAILABLE CURIES	PAGE
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- NOTE:
- No letdown or sprays are assumed available.
  - Containment Air concentration ( $\mu\text{Ci/cc}$ ) = Ci Cont. Air  $\times 1.92\text{E-}5$ .
  - RCS concentration ( $\mu\text{Ci/cc}$ ) = Ci Cont. Air  $\times 3.765\text{E-}3$ .
  - Data is given for 0, 1, 2 and 4 hours after LOCA occurs.

HOURS AFTER LOCA	CHRRMS R/hr	EVENT DESCRIPTION	Ci N.G. Cont. Air	Ci IODINE (HALOGEN) Cont. Air	RCS D.E. I-131 $\mu\text{Ci/ml}$
0	1.5E+6	100% NG, 50% HAL Released to Cont. Air	8.2E+8 Ci	4.4E+8 Ci	1.99E+5 $\mu\text{Ci/ml}$
	1.5E+5	10% NG, 5% HAL Released to Cont. Air	8.2E+7 Ci	4.4E+7 Ci	1.99E+4 $\mu\text{Ci/ml}$
	1.5E+4	1% NG, .5% HAL Released to Cont. Air	8.2E+6 Ci	4.4E+6 Ci	1.99E+3 $\mu\text{Ci/ml}$
	1.9E+3	100% GAP Released to Cont. Air	1.74E+6 Ci	1.59E+6 Ci	2.76E+3 $\mu\text{Ci/ml}$
	1.9E+2	10% GAP Released to Cont. Air	1.74E+5 Ci	1.59E+5 Ci	2.76E+2 $\mu\text{Ci/ml}$
	1.9E+1	1% GAP Released to Cont. Air	1.74E+4 Ci	1.59E+4 Ci	2.76E+1 $\mu\text{Ci/ml}$
	9.0	1% Failed Fuel Primary Gas Release	6.12E+4 Ci	2.00E+3 Ci	2.40E+0 $\mu\text{Ci/ml}$

HOURS AFTER LOCA	CHRRMS R/hr	EVENT DESCRIPTION	Ci N.G. Cont. Air	Ci IODINE (HALOGEN) Cont. Air
1	5.5E+5	100% NG, 50% HAL Released to Cont. Air	3.57E+8 Ci	2.72E+8 Ci
	5.5E+4	10% NG, 5% HAL Released to Cont. Air	3.57E+7 Ci	2.72E+7 Ci
	5.5E+3	1% NG, .5% HAL Released to Cont. Air	3.57E+6 Ci	2.72E+6 Ci
	1.75E+3	100% GAP Released to Cont. Air	1.69E+6 Ci	1.45E+6 Ci
	1.75E+2	10% GAP Released to Cont. Air	1.69E+5 Ci	1.45E+5 Ci
	1.75E+1	1% GAP Released to Cont. Air	1.69E+4 Ci	1.45E+4 Ci
	8.0	1% Failed Fuel Primary Gas Release	6.01E+4 Ci	1.84E+3 Ci

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.09	MATRIX:	12
ATTACHMENT	CHRRMS - EVENT - AVAILABLE CURIES	PAGE
6		2 of 2

- NOTE:
- No Letdown or Sprays are assumed available.
  - Containment Air concentration ( $\mu\text{Ci/cc}$ ) = Ci Cont. Air  $\times 1.92\text{E-}5$ .
  - RCS concentration ( $\mu\text{Ci/cc}$ ) = Ci Cont. Air  $\times 3.765\text{E-}3$ .
  - Data is given for 0, 1, 2 and 4 hours after LOCA occurs.

HOURS AFTER LOCA	CHRRMS R/hr	EVENT DESCRIPTION	Ci N.G. Cont. Air	Ci IODINE (HALOGEN) Cont. Air
2	4.0E+5	100% NG, 50% HAL Released to Cont. Air	3.14E+8 Ci	2.26E+8 Ci
	4.0E+4	10% NG, 5% HAL Released to Cont. Air	3.14E+7 Ci	2.26E+7 Ci
	4.0E+3	1% NG, .5% HAL Released to Cont. Air	3.14E+6 Ci	2.26E+6 Ci
	1.5E+3	100% GAP Released to Cont. Air	1.65E+6 Ci	1.37E+6 Ci
	1.5E+2	10% GAP Released to Cont. Air	1.65E+5 Ci	1.37E+5 Ci
	1.5E+1	1% GAP Released to Cont. Air	1.65E+4 Ci	1.37E+4 Ci
	7.5	1% Failed Fuel Primary Gas Release	6.00E+4 Ci	1.73E+3 Ci

HOURS AFTER LOCA	CHRRMS R/hr	EVENT DESCRIPTION	Ci N.G. Cont. Air	Ci IODINE (HALOGEN) Cont. Air
4	2.75E+5	100% NG, 50% HAL Released to Cont. Air	2.70E+8 Ci	1.78E+8 Ci
	2.75E+4	10% NG, 5% HAL Released to Cont. Air	2.70E+7 Ci	1.78E+7 Ci
	2.75E+3	1% NG, .5% HAL Released to Cont. Air	2.70E+6 Ci	1.78E+6 Ci
	1.2E+3	100% GAP Released to Cont. Air	1.59E+6 Ci	1.25E+6 Ci
	1.2E+2	10% GAP Released to Cont. Air	1.59E+5 Ci	1.25E+5 Ci
	1.2E+1	1% GAP Released to Cont. Air	1.59E+4 Ci	1.25E+4 Ci
	7	1% Failed Fuel Primary Gas Release	5.85E+4 Ci	1.56E+3 Ci

VIRGINIA POWER  
NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.26	PROCEDURE TITLE HIGH LEVEL ACTIVITY SAMPLE ANALYSIS (With 2 Attachments)	REVISION 11
		PAGE 1 of 6

PURPOSE

To provide guidance for analyzing high activity samples during an emergency.

**LEVEL 2 DISTRIBUTION**  
This Document Should Be Verified  
And Annotated To A Controlled Source  
As Required to Perform Work

ENTRY CONDITIONS

Any one of the following:

1. Activation by EPIP-4.22, POST ACCIDENT SAMPLING OF CONTAINMENT AIR.
2. Activation by EPIP-4.23, POST ACCIDENT SAMPLING OF REACTOR COOLANT.
3. Activation by another EPIP.
4. Detector dead time exceeds 10%.
5. Sample activity greater than 10 mrem/hr.

Approvals on File

Effective Date

9/13/01

NUMBER EPIP-4.26	PROCEDURE TITLE HIGH LEVEL ACTIVITY SAMPLE ANALYSIS	REVISION 11 PAGE 2 of 6
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1	INITIATE PROCEDURE: <ul style="list-style-type: none"> <li>By: _____</li> <li>Date: _____</li> <li>Time: _____</li> </ul>	
2	VERIFY HP COUNT ROOM AREA RADIATION LEVELS PERMIT SAMPLE ANALYSIS	<p><u>IF</u> use of alternate analysis facility required, <u>THEN</u> establish alternate analysis facility in Admin Annex HP Lab.</p> <p><u>IF</u> alternate facility <u>NOT</u> available, <u>THEN</u> do the following:</p> <p>a) Ask RPS for assistance in preparation for sample shipment offsite.</p> <p>b) GO TO Step 13.</p>
	<p><u>NOTE:</u> Gross failure of fuel cladding may yield significant quantities of noble gases or volatiles, as well as fission products, in the sample. Use of protective clothing and respiratory protection is advisable during sample preparation.</p>	
3	ACTIVATE RWP FOR POST-ACCIDENT SAMPLE OF REACTOR COOLANT OR CONTAINMENT AIR	<p><u>IF NOT</u> analyzing a post-accident reactor coolant or containment air sample, <u>THEN</u> ask RPS to assess need for RWP.</p>

NUMBER EPIP-4.26	PROCEDURE TITLE HIGH LEVEL ACTIVITY SAMPLE ANALYSIS	REVISION 11 PAGE 3 of 6
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4 DETERMINE RESPONSE ACTIONS BASED  
ON SAMPLE ACTIVITY LEVEL:

<u>IF</u> the following condition exists:	<u>THEN</u> do the following:
Sample activity GREATER THAN 1000 mR/hr	GO TO Step 6.
Sample activity GREATER THAN 10 mR/hr (but LESS THAN 1000 mR/hr)	a. Take sample to Hot Lab or HRSS hood. b. GO TO Step 5.
Sample activity yields GREATER THAN 10% detector dead time	a. Take sample to Hot Lab or HRSS hood. b. GO TO Step 5.
Sample activity LESS THAN 10 mR/hr	a. Take sample to Count Room. b. GO TO Step 11.

5 DETERMINE FOLLOW-UP ACTIONS:

- Dilute sample: GO TO Step 6
- Allow sample to decay: GO TO Step 9
- Reduce sample volume: GO TO Step 10
- Analyze sample in elevated position: GO TO Step 12

NUMBER EPIP-4.26	PROCEDURE TITLE HIGH LEVEL ACTIVITY SAMPLE ANALYSIS	REVISION 11 PAGE 4 of 6
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6	<p>VERIFY LIQUID OR GAS SAMPLE TO BE DILUTED:</p> <p>a) Use a Fume Hood when doing dilutions in Hot Lab or HRSS hood</p> <p>b) Verify LIQUID sample to be diluted</p> <p>c) Verify liquid sample from source other than Sentry System</p> <p>d) Do LIQUID sample dilution:</p> <p>1) Determine appropriate dilution ratio, e.g., 1:10 dilution (0.1 times original volume), 1:1000 dilution (0.001 times original volume)</p> <p>2) Perform dilution</p> <p>3) Check sample activity - WITHIN LIMITS</p> <p>4) GO TO Step 11</p>	<p><u>IF</u> diluting radioiodine or particulate air sample, or if sample dilution is <u>NOT</u> acceptable, <u>THEN</u> GO TO Step 9.</p> <p>b) <u>IF</u> diluting GASEOUS sample, <u>THEN</u> do the following:</p> <p>1) Perform a 1:100 dilution (0.01 times original volume).</p> <p>2) GO TO Step 11.</p> <p>c) <u>IF</u> sample activity of liquid sample from Sentry System LESS THAN 1000 mR/hr, <u>THEN</u> GO TO Step 6.d.</p> <p><u>IF</u> sample activity of liquid sample from Sentry System GREATER THAN 1000 mR/hr, <u>THEN</u> GO TO Step 7.</p> <p>3) <u>IF</u> sample activity still too high, <u>THEN</u> do additional dilution(s) to yield an acceptable activity level.</p>

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.26	HIGH LEVEL ACTIVITY SAMPLE ANALYSIS	11
		PAGE 5 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7	<p>GET THE FOLLOWING EQUIPMENT:</p> <ul style="list-style-type: none"> <li>• Operable Fume Hood</li> <li>• 1,000 ml volumetric flasks partially filled with demineralized water (<math>\approx</math> 800 ml)</li> <li>• Dilutor Assembly</li> <li>• Lead bricks (as needed)</li> <li>• Phillips-head screwdriver</li> <li>• Adjustable wrench</li> <li>• Vent tube with attached needle</li> <li>• One squeeze bottle of dilution water</li> <li>• Grease pencil</li> <li>• Three tape strips (<math>\approx</math> 4" each)</li> <li>• Sample containers</li> </ul>	
8	INITIATE ATTACHMENT 2, DILUTE SAMPLE USING SENTRY SYSTEM	
9	<p>CHECK TIME AVAILABLE TO ALLOW SAMPLE DECAY PRIOR TO ANALYSIS:</p> <p>a) Isolate sample to prevent personnel exposure</p> <p>b) Keep sample for later analysis</p> <p>c) GO TO Step 11</p>	<p><u>IF</u> air sample, <u>THEN</u> do the following:</p> <p>1) Separate particulate and silver zeolite cartridges.</p> <p>2) Count particulate and silver zeolite cartridge separately.</p> <p>3) GO TO Step 12.</p> <p><u>IF</u> sample volume to be reduced, <u>THEN</u> GO TO Step 10.</p> <p><u>IF</u> sample to be analyzed, <u>THEN</u> GO TO Step 11.</p>

NUMBER EPIP-4.26	PROCEDURE TITLE HIGH LEVEL ACTIVITY SAMPLE ANALYSIS	REVISION 11 PAGE 6 of 6
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

\_\_\_\_ 10 REDUCE SAMPLE VOLUME:

a) Verify GAS sample

a) IF LIQUID sample, THEN do the following:

1) Put desired sample volume in suitable container with a calibrated geometry.

2) Dilute sample (to appropriate mark) with water.

b) Record volume of undiluted sample in the container

\_\_\_\_ 11 VERIFY BOTH THE FOLLOWING CONDITIONS EXIST:

RETURN TO Step 5.

- Verify sample dose rate reads LESS THAN 10 mR/hr

- Calibrated elevated geometry NOT available for use

\_\_\_\_ 12 TAKE SAMPLE TO COUNT ROOM FOR ANALYSIS IAW NORMAL HP PROCEDURES

\_\_\_\_ 13 TERMINATE EPIP-4.26:

- Give completed EPIP-4.26, forms, and other applicable records to the RPS

- Completed by: \_\_\_\_\_

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

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

-END-

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.26	HRSS DILUTOR ASSEMBLY	11
ATTACHMENT	FIGURE 1	PAGE
1		1 of 4

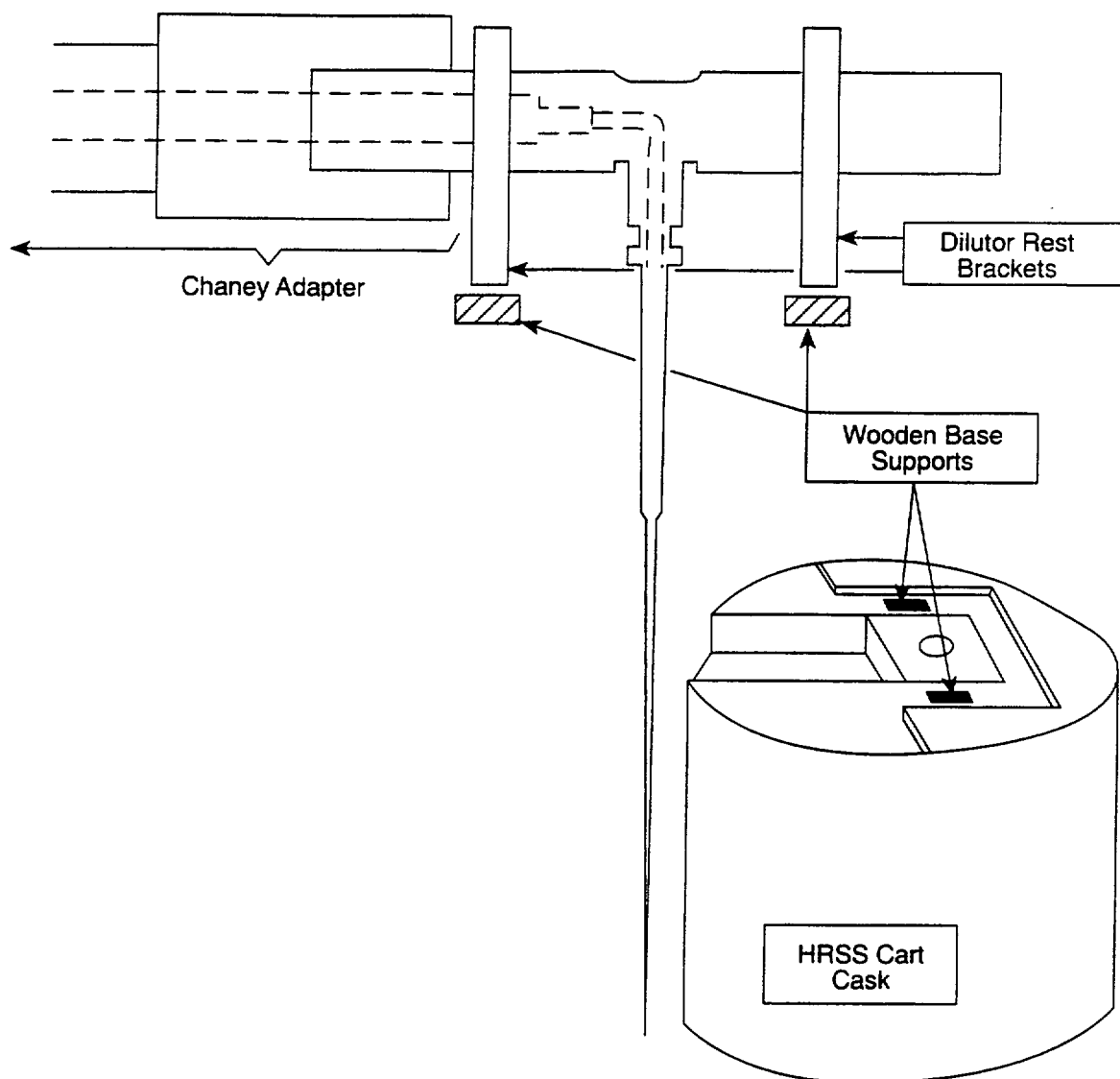
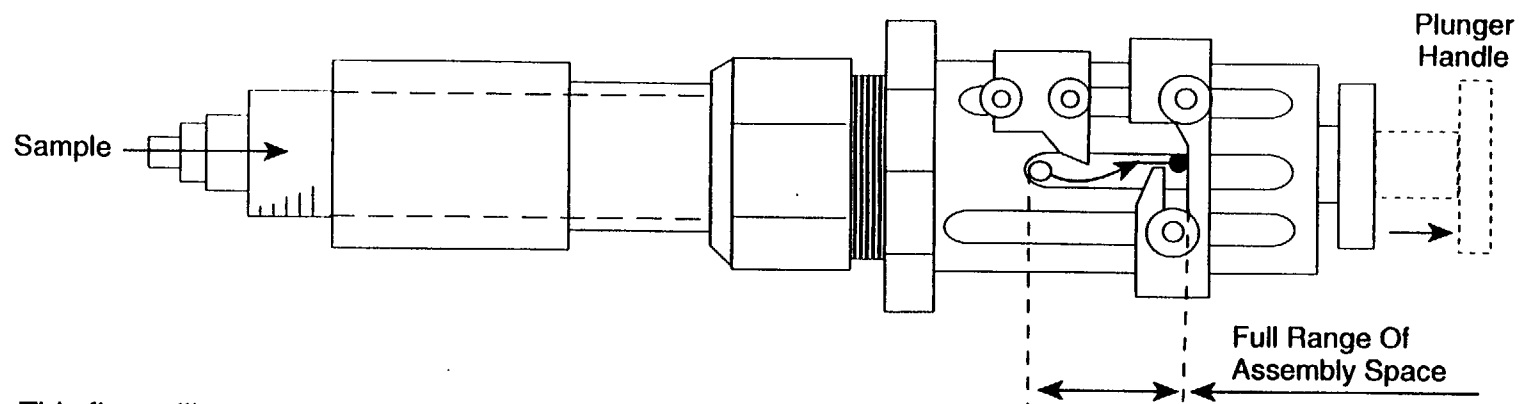


FIGURE 1  
HRSS DILUTOR ASSEMBLY

Graphics No: LD2628

DILUTOR ASSEMBLY INCLUDES SYRINGE AND CHANEY ASSEMBLIES

NUMBER	ATTACHMENT TITLE	REVISION
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ATTACHMENT	CHANEY ADAPTER	PAGE
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This figure illustrates the withdrawal of the plunger handle to capture a > 2.0 ml sample.

FIGURE 2

CHANEY ADAPTER

Graphics No: BP562A

<b>NUMBER</b> EPIP-4.26	<b>ATTACHMENT TITLE</b> CHANEY ADAPTER FIGURE 3	<b>REVISION</b> 11
<b>ATTACHMENT</b> 1		<b>PAGE</b> 3 of 4

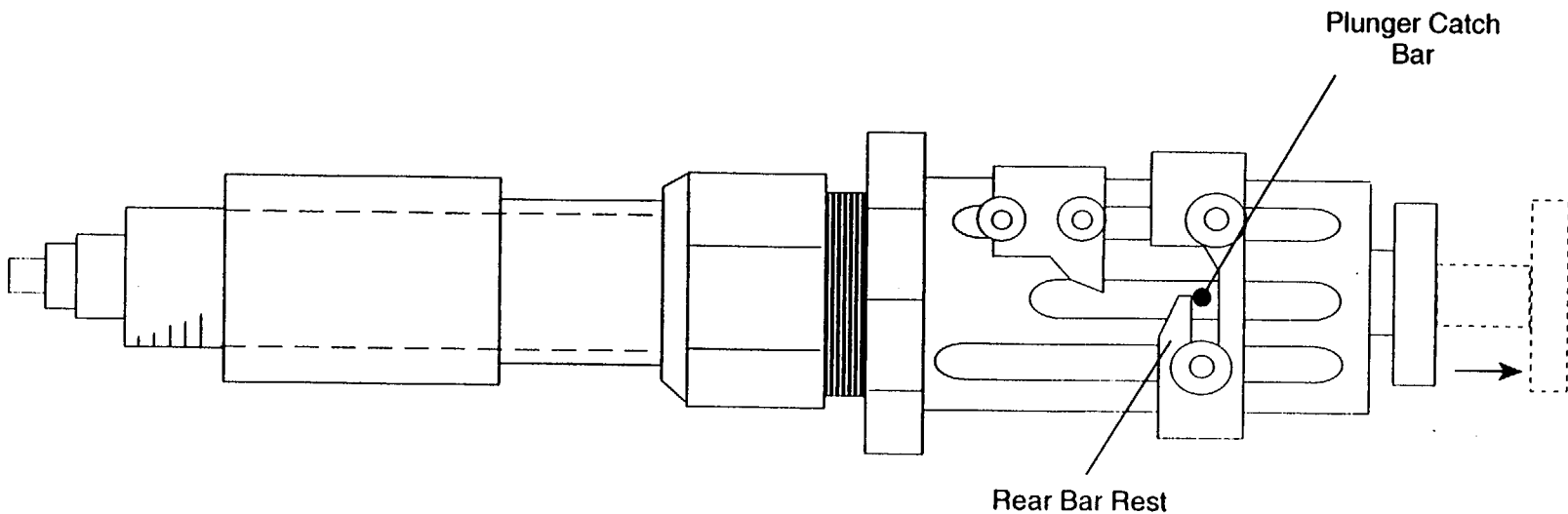


Figure illustrates the resting of the plunger catch bar on the rear bar rest following the withdrawal of sample.

FIGURE 3  
 CHANEY ADAPTER

Graphics No: BP561A

<b>NUMBER</b> EPIP-4.26	<b>ATTACHMENT TITLE</b> CHANEY ADAPTER FIGURE 4	<b>REVISION</b> 11
<b>ATTACHMENT</b> 1		<b>PAGE</b> 4 of 4

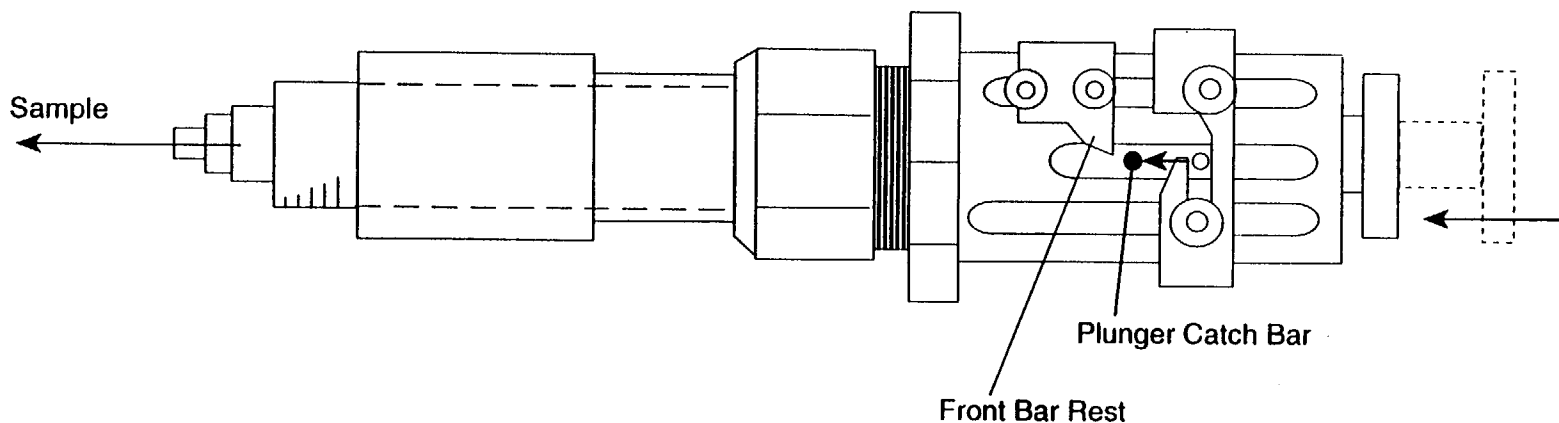


Figure illustrates the expulsion of sample into flask or tared vial. Plunger catch bar travels from rear to front bar rest.

FIGURE 4

CHANEY ADAPTER

*Graphics No: BP563A*

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.26	DILUTE SAMPLE USING SENTRY SYSTEM	11
ATTACHMENT		PAGE
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- 1) Place 1000 ml volumetric flask in fume hood.
- 2) Position cask near the fume hood.
- 3) Remove auxiliary shield hold-down bolts, as needed.
- 4) Remove needle plug.
- 5) IF radiation levels increase when plug is removed, THEN use lead bricks to reduce streaming.
- 6) Place end of vent tube in strong vacuum area of hood and tape down to inside of the hood.
- 7) Carefully insert vent needle into guide and puncture septum to vent vial.
- 8) Remove needle and store in hood.
- 9) Place support blocks in appropriate locations so that dilutor rest brackets will sit squarely on them (see Attachment 1, Figure 1).
- 10) Ensure syringe plunger is in the fully expelled position.
- 11) Carefully insert needle of dilutor into guide and bring to rest on support blocks.
- 12) Slowly withdraw maximum amount of sample (greater than 2.0 mls) by withdrawing plunger handle full range of assembly space (see Attachment 1, Figure 2).
- 13) Bring the plunger catch bar to rest on the rear bar rest (see Attachment 1, Figure 3).
- 14) Carefully remove dilutor assembly from needle guide by pulling up in one straight motion.
- 15) Carefully insert needle into neck of volumetric flask.
- 16) Carefully touch tip of needle to wall of flask while slowly expelling contents of syringe and depress plunger handle only as far as front bar rest (see Attachment 1, Figure 4). This expells exactly 2.0 mls.
- 17) Add dilution water to volumetric flask to bring level up to 1000 mls.

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.26	DILUTE SAMPLE USING SENTRY SYSTEM	11
ATTACHMENT		PAGE
2		2 of 2

18) Label 1 liter volumetric flask with date, time of sample, sample location, and one of the following:

- 0.002 RCS for diluted HRSS

OR

- 2 mls for an undiluted sample.

19) Check 1 liter volumetric flask is LESS THAN 10 mR/hr, then GO TO Step 20 of this Attachment 2

OR

IF NOT LESS THAN 10 mR/hr, THEN GO TO EPIP-4.26, Step 5.

20) Get HP assistance and select a suitable sample container with a calibrated geometry.

21) Measure diluted sample from Step 18 above into selected sample container with the calibrated geometry.

22) Label container with date, sample time, sample location and actual mls of RCS in the sample geometry:

$$\frac{\text{Actual mls RCS}}{\text{mls RCS}} = \frac{\text{mls sample from Step 18}}{1000} \times \text{mls solution from Step 21}$$

23) Remove temporary shielding (if installed) and replace auxiliary shield on cask. Replace needle shield when time permits.

24) GO TO EPIP-4.26, Step 12.

NORTH ANNA POWER STATION  
LIST OF NAPS EMERGENCY PLAN IMPLEMENTATION PROCEDURES  
CHECK DHIS FOR LATEST DOCUMENT INFORMATION

DOCUMENT NUMBER	REV	APPROVAL **DATE**	EFFECT** **DATE**	DOCUMENT TITLE
-----	---	-----	-----	-----
EPIP-1.01	034	07/26/01	09/13/01	EMERGENCY MANAGER CONTROLLING PROCEDURE
EPIP-1.02	011	09/07/99	10/01/99	RESPONSE TO NOTIFICATION OF UNUSUAL EVENT
EPIP-1.03	014	09/07/99	10/01/99	RESPONSE TO ALERT
EPIP-1.04	014	09/07/99	10/01/99	RESPONSE TO SITE AREA EMERGENCY
EPIP-1.05	016	09/07/99	10/01/99	RESPONSE TO GENERAL EMERGENCY
EPIP-1.06	004	09/05/01	09/05/01	PROTECTIVE ACTION RECOMMENDATIONS
EPIP-2.01	024	09/24/01	09/26/01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS
EPIP-2.02	014	01/04/99	01/29/99	NOTIFICATION OF NRC
EPIP-2.04	003	08/07/92	08/07/92	TRANSMITTAL OF PLANT, RADIOLOGICAL AND EMERGENCY STATUS
EPIP-3.02	018	12/17/97	01/07/98	ACTIVATION OF TECHNICAL SUPPORT CENTER
EPIP-3.03	012	12/20/93	01/01/94	ACTIVATION OF OPERATIONAL SUPPORT CENTER
EPIP-3.04	015	07/14/98	07/20/98	ACTIVATION OF LOCAL EMERGENCY OPERATIONS FACILITY
EPIP-3.05	001	09/07/99	10/01/99	AUGMENTATION OF EMERGENCY RESPONSE ORGANIZATION
EPIP-4.01	016	05/12/99	05/17/99	RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE
EPIP-4.02	012	07/25/00	08/02/00	RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE
EPIP-4.03	011	12/20/93	01/01/94	DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE
EPIP-4.04	009	11/21/94	11/28/94	EMERGENCY PERSONNEL RADIATION EXPOSURE
EPIP-4.05	009	01/28/00	02/04/00	RESPIRATORY PROTECTION AND KI ASSESSMENT
EPIP-4.06	009	12/21/95	12/28/95	PERSONNEL MONITORING AND DECONTAMINATION
EPIP-4.07	014	09/29/00	10/06/00	PROTECTIVE MEASURES
EPIP-4.08	013	07/26/01	09/13/01	INITIAL OFFSITE RELEASE ASSESSMENT
EPIP-4.09	012	07/26/01	09/13/01	SOURCE TERM ASSESSMENT
EPIP-4.10	010	04/23/98	04/28/98	DETERMINATION OF X/Q

NORTH ANNA POWER STATION  
LIST OF NAPS EMERGENCY PLAN IMPLEMENTATION PROCEDURES  
CHECK DMIS FOR LATEST DOCUMENT INFORMATION

DOCUMENT NUMBER	REV	APPROVAL **DATE**	EFFECT** **DATE**	DOCUMENT TITLE
EPIP-4.13	009	09/29/00	10/06/00	OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA
EPIP-4.14	007	12/20/93	01/01/94	INPLANT MONITORING
EPIP-4.15	011	02/18/00	02/28/00	ONSITE MONITORING
EPIP-4.16	014	02/18/00	02/28/00	OFFSITE MONITORING
EPIP-4.17	014	08/12/98	08/14/98	MONITORING OF EMERGENCY RESPONSE FACILITIES
EPIP-4.18	011	08/12/98	08/14/98	MONITORING OF LEOF
EPIP-4.21	008	12/20/93	01/01/94	EVACUATION AND REMOTE ASSEMBLY AREA MONITORING
EPIP-4.22	013	04/02/93	04/02/93	POST ACCIDENT SAMPLING OF CONTAINMENT AIR
EPIP-4.23	013	03/13/96	03/18/96	POST ACCIDENT SAMPLING OF REACTOR COOLANT
EPIP-4.24	010	07/20/99	07/22/99	GASEOUS EFFLUENT SAMPLING DURING AN EMERGENCY
EPIP-4.25	008	07/23/93	07/23/93	LIQUID EFFLUENT SAMPLING DURING AN EMERGENCY
EPIP-4.26	011	07/26/01	09/13/01	HIGH LEVEL ACTIVITY SAMPLE ANALYSIS
EPIP-4.28	007	01/09/97	01/14/97	TSC/LEOF RADIATION MONITORING SYSTEM
EPIP-4.30	004	01/04/99	01/08/99	USE OF MIDAS CLASS A MODEL
EPIP-4.31	003	06/20/94	06/20/94	USE OF MIDAS CLASS B MODEL
EPIP-4.33	003	11/28/00	11/30/00	HEALTH PHYSICS NETWORK COMMUNICATIONS
EPIP-4.34	002	02/18/00	02/28/00	FIELD TEAM RADIO OPERATOR INSTRUCTIONS
EPIP-5.01	011	12/11/96	12/17/96	TRANSPORTATION OF CONTAMINATED INJURED PERSONNEL
EPIP-5.03	016	02/18/00	02/28/00	PERSONNEL ACCOUNTABILITY
EPIP-5.04	008	07/20/99	07/22/99	ACCESS CONTROL
EPIP-5.05	013	06/25/96	07/02/96	SITE EVACUATION
EPIP-5.07	011	07/25/00	08/02/00	ADMINISTRATION OF RADIOPROTECTIVE DRUGS
EPIP-5.08	007	11/28/00	11/30/00	DAMAGE CONTROL GUIDELINE

NORTH ANNA POWER STATION  
LIST OF NAPS EMERGENCY PLAN IMPLEMENTATION PROCEDURES  
CHECK DMIS FOR LATEST DOCUMENT INFORMATION

DOCUMENT NUMBER	REV	APPROVAL **DATE**	EFFECT** **DATE**	DOCUMENT TITLE
-----	---	-----	-----	-----
EPIP-5.09	003	03/26/99	03/31/99	SECURITY TEAM LEADER CONTROLLING PROCEDURE
EPIP-6.01	007	05/12/99	05/17/99	RE-ENTRY/RECOVERY GUIDELINE