

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

October 25, 2001

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

Serial No. 01-633  
NAPS/MPW  
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

A045

**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-4.01, Rev. 16	05/17/99	EPIP-4.01, Rev. 17	10/17/01

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

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-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	017	10/09/01	10/17/01	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 DHIS 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

VIRGINIA POWER  
NORTH ANNA POWER STATION  
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.01	PROCEDURE TITLE RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE (With 1 Attachment)	REVISION 17
		PAGE 1 of 27

**PURPOSE**

To initially assess emergency conditions, provide recommendations for protective measures, establish an emergency organization and direct Health Physics response to an emergency.

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

**ENTRY CONDITIONS**

Activation by EPIP-1.01, EMERGENCY MANAGER CONTROLLING PROCEDURE.

Approvals on File

Effective Date

10/17/01

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 2 of 27
----------------------------	---	---

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>_____ 1 INITIATE PROCEDURE:</p> <p style="margin-left: 40px;">a) By: _____</p> <p style="margin-left: 80px;">Date: _____</p> <p style="margin-left: 80px;">Time: _____</p> <p style="margin-left: 40px;">b) Assume position of Radiological Assessment Director (RAD)</p> <p style="margin-left: 40px;">c) Initiate a chronological log to record sequence of events, key decisions, action taken, and other applicable information related to the event</p>		
<p>_____ 2 GO TO THE CONTROL ROOM</p>		<p><u>IF</u> conditions require your presence in another location, <u>THEN</u> inform SEM</p> <p style="text-align: center;"><u>AND</u></p> <p>Report to the Control Room immediately upon completion of task.</p>
<p><b><u>NOTE:</u></b> During the initial stages of the emergency the Operations Shift Supervisor may assume the position of Station Emergency Manager.</p>		
<p>_____ 3 ASK SEM FOR BRIEFING ON THE FOLLOWING PARAMETERS:</p> <ul style="list-style-type: none"> <li>• Plant status</li> <li>• Emergency Action Levels (EALs) exceeded</li> <li>• Emergency Classification</li> </ul>		

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 3 of 27
----------------------------	---	---

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 4	CHECK IF EMERGENCY FACILITIES ARE BEING ACTIVATED	GO TO Step 6.
_____ 5	MOVE TO TSC	
	<b>NOTE:</b> A minimum of 2 (two) Offsite Monitoring Teams must be dispatched (i.e., sent into the field) upon a Site Area Emergency or higher emergency class.	
_____ 6	CHECK HP SUPPORT - REQUIRED	<u>IF</u> HP support <u>NOT</u> immediately required, <u>THEN</u> do the following: <ul style="list-style-type: none"> <li>• <u>WHEN</u> HP support required, <u>THEN</u> GO TO Step 7.</li> <li>• <u>WHEN</u> emergency is terminated, <u>THEN</u> GO TO Step 38.</li> </ul>
_____ 7	CHECK IF EVENT INVOLVES ACTUAL OR POTENTIAL OFFSITE RELEASE	GO TO Step 25.
_____ 8	INITIATE SAMPLING OF EFFLUENT PATHWAY	<u>IF</u> unable to get effluent sample, <u>THEN</u> initiate source term sampling.
_____ 9	DIRECT INITIATION OF EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE	



NUMBER EPIP-4.01	PROCEDURE TITLE RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	REVISION 17
		PAGE 4 of 27

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED												
10	DIRECT INITIATION OF EPIP-4.30, USE OF MIDAS CLASS A MODEL	<p>IF MIDAS <u>NOT</u> operable, <u>THEN</u> initiate back-up assessment using desk-top calculations:</p> <ul style="list-style-type: none"><li>EPIP-4.08, INITIAL OFFSITE RELEASE ASSESSMENT.</li><li>EPIP-4.09, SOURCE TERM ASSESSMENT.</li><li>EPIP-4.10, DETERMINATION OF X/Q.</li></ul>												
11	DIRECT RPS TO INITIATE EPIP-4.02, RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE													
12	DETERMINE EVENT CLASSIFICATION:													
	<table><tr><th>ASSESSMENT RESULTS</th><th>CLASSIFICATION</th></tr><tr><td>Normal range monitors ONSCALE and indicate &lt; 100% TS</td><td>N/A: Below classification limits</td></tr><tr><td>Normal range monitors ONSCALE and indicate ≥ 100% TS (but &lt; 1000%)</td><td>Notification of Unusual Event</td></tr><tr><td>% TS calculations indicate ≥ 1000%</td><td>Alert</td></tr><tr><td>Site Boundary dose ≥ 100 mrem TEDE 500 mrem Thyroid CDE</td><td>Site Area Emergency</td></tr><tr><td>Site Boundary dose ≥ 1 Rem TEDE or 5 Rem Thyroid CDE</td><td>General Emergency</td></tr></table>	ASSESSMENT RESULTS	CLASSIFICATION	Normal range monitors ONSCALE and indicate < 100% TS	N/A: Below classification limits	Normal range monitors ONSCALE and indicate ≥ 100% TS (but < 1000%)	Notification of Unusual Event	% TS calculations indicate ≥ 1000%	Alert	Site Boundary dose ≥ 100 mrem TEDE 500 mrem Thyroid CDE	Site Area Emergency	Site Boundary dose ≥ 1 Rem TEDE or 5 Rem Thyroid CDE	General Emergency	
ASSESSMENT RESULTS	CLASSIFICATION													
Normal range monitors ONSCALE and indicate < 100% TS	N/A: Below classification limits													
Normal range monitors ONSCALE and indicate ≥ 100% TS (but < 1000%)	Notification of Unusual Event													
% TS calculations indicate ≥ 1000%	Alert													
Site Boundary dose ≥ 100 mrem TEDE 500 mrem Thyroid CDE	Site Area Emergency													
Site Boundary dose ≥ 1 Rem TEDE or 5 Rem Thyroid CDE	General Emergency													
13	GIVE ASSESSMENT BASED CLASSIFICATION TO SEM													

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 5 of 27
----------------------------	---	---

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
14	CHECK NOTIFICATION OF UNUSUAL EVENT IN EFFECT OR EVENT IS BELOW CLASSIFICATION LIMITS:  a) Report percent Tech. Spec. and Site Boundary dose rate to Station Emergency Manager  b) Get backup sample of the effluent release path  c) Have sample analyzed using Health Physics Procedures  d) GO TO Step 20 for follow up assessment	GO TO Step 15.      b) <u>IF</u> unavailable, <u>THEN</u> GO TO Step 20.
15	INITIATE RESPONSE ACTIONS FOR CONDITION IV LIMITING FAULT ACCIDENT:  • Fuel Handling Accident - GO TO Step 16  • Steam Generator Tube Rupture - GO TO Step 17  • Main Steam Line Rupture - GO TO Step 18  • LOCA - GO TO Step 19	<u>IF</u> event <u>NOT</u> Limiting Fault, <u>THEN</u> GO TO Step 20.

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 6 of 27
----------------------------	---	---

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p><b>NOTE:</b> Analysis of accidents involving decayed spent fuel should include consideration of onsite skin dose due to Kr-85.</p>	
<p>16</p>	<p>INITIATE RESPONSE ACTIONS FOR FUEL HANDLING ACCIDENT:</p>	
	<p>a) Recommend evacuation of the Fuel Building and affected containment</p>	
	<p>b) Restrict access until radiological assessment can be made</p>	
	<p>c) Have EPIP-4.06, PERSONNEL MONITORING AND DECONTAMINATION, initiated to monitor individuals evacuated from accident area</p>	
	<p>d) Report dose assessment (MIDAS or desk-top) results to SEM</p>	
	<p>e) GO TO Step 21</p>	



<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 8 of 27
----------------------------	---	---

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>17 INITIATE RESPONSE ACTIONS FOR STEAM GENERATOR TUBE RUPTURE: (Continued)</p> <p>d) Check Steam Driven Auxiliary Feedwater Pump (SDAFWP) Turbine - ISOLATED</p> <p>e) Disregard SDAFWPT as a release pathway</p> <p>f) Ask SEM for placement of individual to report the following data:</p> <p>1) Initial monitor readings</p> <p>2) Increase or decrease in Main Steam and SDAFWP exhaust radiation monitors</p> <p>3) Meteorological panel indications</p> <p>g) Report dose assessment (MIDAS or desk-top) results to SEM</p>	<p>d) <u>IF</u> SDAFWP Turbine <u>NOT</u> ISOLATED, <u>THEN</u> do the following:</p> <p>1) Ask SEM to isolate main steam supply from affected generator to Steam Driven Auxiliary Feedwater Pump.</p> <p>2) GO TO Step 17.f.</p>

(STEP 17 CONTINUED ON NEXT PAGE)

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 9 of 27
----------------------------	---	---

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
17	<p>INITIATE RESPONSE ACTIONS FOR STEAM GENERATOR TUBE RUPTURE: (Continued)</p> <p>h) Restrict access in the following areas until survey(s) confirm no radiological hazards:</p> <ul style="list-style-type: none"> <li>• Steam Generator Blowdown Cooler area</li> <li>• Steam Generator Blowdown Lines and Vent area</li> <li>• Steam Generator Relief Valve area</li> <li>• Steam Driven Auxiliary Feedwater Pump Turbine exhaust area</li> <li>• Powdex Area - Turbine Building, 303' level</li> <li>• Main Steam Valve House</li> </ul> <p>i) Consider activation of EPIP-4.23, POST ACCIDENT SAMPLING OF REACTOR COOLANT, to assess core damage</p> <p>j) Consider sampling of Steam Generator Blowdown and Main Steam of affected unit</p> <p>k) Determine potential for liquid release pathway through the Main Steam Safety Valve</p> <p>l) GO TO Step 21</p>	<p>i) <u>IF</u> personnel <u>NOT</u> available, <u>THEN</u> consider sampling upon arrival of additional manpower.</p>

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 10 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
18	INITIATE RESPONSE ACTIONS FOR MAIN STEAM LINE RUPTURE:	
	a) Ask SEM for release parameters:	
	1) Location of steam break	
	2) Status of actual or potential Main Steam Safety Valve lift	
	3) Number of valves lifted:	
	4) Length of time valves remained open: _____(min.)	
	5) Status of Steam Driven Auxiliary Feedwater Pump isolation	
	6) Monitor reading on Main Steam Monitors and Steam Driven Auxiliary Feedwater Pump exhaust radiation monitors	
	b) Check station ventilation vent radiation monitors for release indication	b) <u>IF</u> NO release indicated, <u>THEN</u> do the following:
		1) Notify SEM that potential for source term development will be evaluated because monitors do not indicate release.
		2) GO TO Step 18.e.
	c) Evaluate release consequences:	
	1) Assess onsite dose rate in area of break (after break is isolated)	
	2) Assess offsite dose rate (STEP 18 CONTINUED ON NEXT PAGE)	

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17
		<b>PAGE</b> 11 of 27

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>18 INITIATE RESPONSE ACTIONS FOR MAIN STEAM LINE RUPTURE: (Continued)</p> <p>d) Report dose assessment (MIDAS or desk-top) results to SEM</p> <p>e) Determine potential for source term to develop inside containment or from Main Steam Relief Valve lift</p> <p>f) Direct initiation of EPIP-4.22, POST ACCIDENT SAMPLING OF CONTAINMENT AIR</p> <p style="text-align: center;"><u>AND</u></p> <p>EPIP-4.23, POST ACCIDENT SAMPLING OF REACTOR COOLANT</p> <p>g) GO TO Step 21</p>	



<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <b>PAGE</b> 12 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
19	<p>INITIATE RESPONSE ACTIONS FOR LOCA:</p> <p>a) Ask SEM for location of break</p> <p>b) Ask SEM for status of Containment Isolation - Phase "A" or "B", and any leak paths from the containment</p> <p>c) Recommend evacuation of Auxiliary Building and Safeguards Building to SEM</p> <p style="text-align: center;"><u>AND</u></p> <p>Restrict entry until survey(s) confirm no radiological hazard exist</p> <p>d) Determine CHRRMS readings (RMS-165, 166 or RMS-265, 266)</p> <p>e) Check release occurred through monitored pathway(s)</p> <p style="text-align: center;"><u>AND</u></p> <p>Report dose assessment (MIDAS or desk-top) results to SEM</p> <p>Direct initiation of EPIP-4.22, POST ACCIDENT SAMPLING OF CONTAINMENT AIR</p> <p style="text-align: center;"><u>AND</u></p> <p>EPIP-4.23, POST ACCIDENT SAMPLING OF REACTOR COOLANT</p> <p>GO TO Step 21</p>	<p>Do the following:</p> <p>1) Direct initiation of EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE.</p> <p>2) Assess actual (unmonitored) or potential release from containment.</p>

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 13 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>_____ 20</p>	<p>INITIATE RESPONSE ACTIONS FOR RADIOLOGICAL RELEASE:</p> <p>a) Record release pathway(s):</p> <p>_____</p> <p>b) Report dose assessment (MIDAS or desk-top) results to SEM</p> <p>c) Ask SEM to place an individual at the monitor of interest to report increase or decrease in readings</p> <p>d) Get sample of effluent pathway</p> <p>e) Analyze samples using normal Health Physics procedures</p> <p>f) Consider initiation of EPIP-4.26, HIGH LEVEL ACTIVITY SAMPLE ANALYSIS</p> <p>g) Verify that an exposure control individual is available to supply dosimetry</p> <p>h) Have RPS coordinate HP coverage needed for any of the following activities:</p> <ul style="list-style-type: none"> <li>• Damage Control Teams</li> <li>• Emergency Security activities</li> <li>• Access control</li> <li>• Personnel monitoring</li> <li>• Sample analysis</li> </ul> <p>i) Consider having RPS prepare for dispatch of Offsite Monitoring Teams:</p> <ul style="list-style-type: none"> <li>• Team assembly</li> <li>• Preparation of equipment and vehicles</li> </ul>	<p>GO TO Step 25.</p> <p>d) <u>IF</u> sample <u>NOT</u> available, <u>THEN</u> use monitor readings for follow-up assessment.</p>

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17
		<b>PAGE</b> 14 of 27

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 21	ENSURE 40CFR302 EPA NOTIFICATION REQUIREMENTS AND REPORTABLE QUANTITY CALCULATIONS ARE EVALUATED IN ACCORDANCE WITH NORMAL HP PROCEDURES	
_____ 22	CHECK IF RESULTS OF OFFSITE RELEASE ASSESSMENT INDICATE SITE BOUNDARY DOSE RATE $\geq$ 50 mrem/hr TEDE OR 250 mrem/hr THYROID CDE	GO TO Step 24.
_____ 23	DETERMINE OFFSITE PROTECTIVE MEASURES:  a) Get an estimate of release duration (hours) from SEM  b) Direct initiation of EPIP-4.07, PROTECTIVE MEASURES  c) Give recommendation to SEM	a) Use 2 hour default.

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 15 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
24	CHECK LEOP (CEOF) HAS LEAD FOR OFFSITE DOSE ASSESSMENT	<p>Do the following:</p> <ul style="list-style-type: none"> <li>a) Assure dose assessment result identification number recorded on all pages.</li> <li>b) Record initials on each page to document approval for issuance of results.</li> <li>c) Review offsite release assessment results with SEM.</li> <li>d) Give applicable dose assessment report to State/Local Emergency Communicator: <ul style="list-style-type: none"> <li>• MIDAS Radiological Status Report (2 pages).</li> <li>• EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE, Attachment 1.</li> </ul> </li> <li>e) Provide updated dose assessment results when any of the following occur: <ul style="list-style-type: none"> <li>• Every 60 minutes during Alert or higher classification.</li> <li>• Within 15 minutes after a classification change.</li> <li>• Change in radiological conditions.</li> </ul> </li> </ul>

NUMBER EPIP-4.01	PROCEDURE TITLE RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	REVISION 17
		PAGE 16 of 27

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
------	--------------------------	-----------------------

- NOTE:**
- The following step lists response actions that may have to be coordinated by the RAD. These actions are not listed in order of priority.
  - A minimum of 2 (two) Offsite Monitoring Teams must be dispatched (i.e., sent into the field) upon a Site Area Emergency or higher emergency class.

25 REVIEW HP RESPONSE ACTIONS AND  
INITIATE RESPONSES ON A PRIORITY  
BASIS:

WHEN all necessary response  
actions addressed, THEN GO TO  
Step 36.

<u>IF</u> HP response action(s) needed,	<u>THEN</u> do the following:
Limiting Fault event (LOCA, Main Steam Line Break, SGTR or Fuel Handling Accident) occurs	RETURN TO Step 15.
New radiological release occurs	RETURN TO Step 20.
New dose assessment results available	RETURN TO Step 12.
Emergency exposure authorization needed	Initiate EPIP-4.04, EMERGENCY PERSONNEL EXPOSURE AUTHORIZATION
Establishment of HP organization	GO TO Step 28.
Dispatch of Offsite Monitoring Team(s)	GO TO Step 29.
Dispatch of Inplant/Onsite Monitoring Team(s)	GO TO Step 31.
Dispatch of LEOF Monitoring Team	GO TO Step 30.
Establishment of Access Control Areas	GO TO Step 32.
Evaluation of need for respiratory protection	GO TO Step 33.
Issuance of radioprotective drugs	GO TO Step 34.
Response to injured contaminated individual(s)	GO TO Step 26.
Evacuation of non-essential personnel	GO TO Step 35.
Radiological/Meteorological parameters needed from Main Control Room (due to unavailability of data to HP staff from plant computers)	Have Attachment 1, Radiological Data Worksheet, completed.
Turnover duties to relief	GO TO Step 27.

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 17 of 27
----------------------------	---	--

**STEP**

**ACTION/EXPECTED RESPONSE**

**RESPONSE NOT OBTAINED**

**NOTE:** First Aid considerations must be given priority over decontamination of individual.

**26 INITIATE RESPONSE TO INJURED  
CONTAMINATED INDIVIDUAL:**

- a) Check if individual requires offsite medical treatment
- b) Direct initiation normal HP procedure(s) for response to contaminated injured personnel
- c) Have RPS review personnel contamination surveys and confirm personnel contaminated
- d) Check if clothing removal and/or onsite decontamination eliminates contamination

AND

Internal contamination is NOT suspected

- e) RETURN TO Step 25

- a) RETURN TO Step 25.

- c) RETURN TO Step 25.

- d) IF individual remains contaminated, THEN do the following:

- 1) Have HP Technician accompany the individual.
- 2) Recommend transport to MCV.

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 18 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>____ 27 GIVE TURNOVER TO RELIEF:</p> <p>a) <u>WHEN</u> a more Senior Health Physics individual arrives onsite</p> <p style="text-align: center;"><u>OR</u></p> <p>Relief - NEEDED, <u>THEN</u> brief successor on:</p> <ul style="list-style-type: none"> <li>• Existing plant conditions</li> <li>• Offsite release assessment performed</li> <li>• Health Physics actions currently underway</li> </ul> <p>b) Notify SEM of position change</p> <p>c) Have relief remain for about 30 minutes to ensure proper turnover</p> <p>d) RETURN TO Step 25</p>		

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 19 of 27
----------------------------	---	--

**STEP**

**ACTION/EXPECTED RESPONSE**

**RESPONSE NOT OBTAINED**

28 ESTABLISH HP EMERGENCY  
ORGANIZATION:

a) Establish Dose Assessment Team:

- 1) Assign 1 Team Leader and 2  
Team Members
- 2) Assign EPIP-4.03, DOSE  
ASSESSMENT TEAM CONTROLLING  
PROCEDURE

b) Establish RPS position

AND

Assign EPIP-4.02, RADIATION  
PROTECTION SUPERVISOR  
CONTROLLING PROCEDURE

c) RETURN TO Step 25

- NOTE:**
- A minimum of 2 (two) Offsite Monitoring Teams must be dispatched (i.e., sent into the field) upon a Site Area Emergency or higher emergency class.
  - The function of plume tracking/offsite monitoring will be the responsibility of the Radiological Assessment Coordinator upon LEOF activation.

29 ASSESS NEED FOR OFFSITE MONITORING:

a) Evaluate need for offsite  
monitoring with Dose Assessment  
Team Leader

b) Check if command and control of  
Offsite Monitoring Teams has  
been transferred to the LEOF

b) GO TO Step 29.d.

c) RETURN TO Step 25

(STEP 29 CONTINUED ON NEXT PAGE)



<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 20 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>29 ASSESS NEED FOR OFFSITE MONITORING: (Continued)</p> <p>d) Have RPS initiate EPIP-4.16, OFFSITE MONITORING</p> <p>e) Evaluate protective measures for offsite teams:</p> <ul style="list-style-type: none"> <li>• TEDE exposure may exceed 10CFR20 annual limits: Initiate EPIP-4.04, EMERGENCY PERSONNEL RADIATION EXPOSURE</li> <li>• Thyroid CDE may exceed 25 Rem: Initiate EPIP-5.07, ADMINISTRATION OF RADIOPROTECTIVE DRUGS</li> <li>• Consider placing teams further downwind</li> </ul> <p>f) Discuss provisions with RPS:</p> <ol style="list-style-type: none"> <li>1) Number of monitoring teams required</li> <li>2) Protective clothing</li> <li>3) Respiratory protection</li> <li>4) Standby assembly of teams, vehicles and equipment</li> <li>5) Notification of TSC prior to team dispatch</li> <li>6) Initial team placement</li> <li>7) Relay of samples/supplies between teams and station</li> <li>8) Relief of teams</li> </ol> <p>g) RETURN TO Step 25</p>	

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 21 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>_____ 30    ACTIVATE LEOF:</p>	<p>a) Have RPS initiate EPIP-4.18, MONITORING OF LEOF</p> <p>b) Brief RAC on the following parameters:</p> <ul style="list-style-type: none"> <li>• Existing plant conditions</li> <li>• Current offsite dose projections</li> <li>• HP actions underway</li> </ul> <p>c) Have Dose Assessment Team Leader brief RAC on the following parameters:</p> <ul style="list-style-type: none"> <li>• Offsite dose assessment</li> <li>• Status and location of offsite monitoring teams</li> </ul> <p>d) Have Dose Assessment Team Member continue transmittal of status information to LEOF:</p> <ul style="list-style-type: none"> <li>• Meteorological data</li> <li>• Monitor data</li> <li>• Sample analysis data</li> </ul> <p>e) RETURN TO Step 25</p>	

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <b>PAGE</b> 22 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
31	<p>INITIATE IN-PLANT / ONSITE MONITORING:</p> <p>a) Review parameters with RPS:</p> <ul style="list-style-type: none"> <li>• Plant conditions</li> <li>• Selection of monitoring and sample locations</li> <li>• Protective gear (clothing, respirators), dosimetry and special precautions for teams</li> <li>• Elevated radiation level readings</li> <li>• Access control points</li> <li>• Recent survey results</li> </ul> <p>b) Have RPS assign EPIP-4.14, INPLANT MONITORING</p> <p style="text-align: center;"><u>AND</u></p> <p>EPIP-4.15, ONSITE MONITORING</p> <p style="text-align: center;"><u>AND</u></p> <p>EPIP-4.17, MONITORING OF EMERGENCY RESPONSE FACILITIES</p> <p style="text-align: center;"><u>AND</u></p> <p>EPIP-4.18, MONITORING OF LEOP</p>	

(STEP 31 CONTINUED ON NEXT PAGE)

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17
		<b>PAGE</b> 23 of 27

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
31	<p>INITIATE IN-PLANT / ONSITE MONITORING: (Continued)</p> <p>c) Notify RPS</p> <p style="text-align: center;"><u>AND</u></p> <p>Ask for repeat survey of emergency response facilities for any of the following conditions:</p> <ul style="list-style-type: none"> <li>• Radiological release occurred</li> <li>• Release severity increases</li> <li>• Change in plume direction toward facility</li> </ul> <p>d) Check if survey data dictates the placement of control points to limit exposure and the spread of contamination</p> <p>e) RETURN TO Step 25</p>	<p>c) GO TO Step 31.d.</p>
	<p>_____ 32</p>	<p>ESTABLISH ACCESS CONTROL AREAS:</p> <p>a) Evaluate radiological hazards before permitting entrance into access controlled areas</p> <p>b) Arrange for HP coverage of emergency evolutions directed by SEM</p> <p>c) Consider having RPS generate an RWP for controlled area entrance requirements</p> <p>d) RETURN TO Step 25</p>

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 24 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
33	<p>EVALUATE RESPIRATORY PROTECTION REQUIREMENTS:</p> <ul style="list-style-type: none"> <li>a) Assess results of air sample analyses</li> <li>b) Recommend relocation of non-essential personnel from areas where high airborne activity is expected or airborne activity &gt; 0.30 DAC</li> <li>c) Initiate EPIP-4.05, RESPIRATORY PROTECTION AND KI ASSESSMENT</li> <li>d) RETURN TO Step 25</li> </ul> <p><b>NOTE:</b> Administration of Potassium Iodine Tables is preferably done prior to exposure, although administration of the drug within 2 hours is considered acceptable.</p>	
34	<p>DETERMINE NEED FOR ISSUANCE OF RADIOPROTECTIVE DRUGS:</p> <ul style="list-style-type: none"> <li>a) Direct initiation of EPIP-4.05, RESPIRATORY PROTECTION AND KI ASSESSMENT</li> <li>b) Determine if actual or projected exposure <math>\geq</math> 25 Rem Thyroid CDE</li> <li>c) Ask SEM for approval to administer radioprotective drugs</li> <li>d) Initiate EPIP-5.07, ADMINISTRATION OF RADIOPROTECTIVE DRUGS</li> <li>e) Get supply of tablets from Health Physics Office</li> <li>f) RETURN TO Step 25</li> </ul>	<ul style="list-style-type: none"> <li>b) RETURN TO Step 25.</li> <li>c) <u>IF</u> approval <u>NOT</u> granted, <u>THEN</u> RETURN TO Step 25.</li> <li>e) Get alternate supply from Surry Power Station.</li> </ul>

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 25 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>_____ 35 EVALUATE NEED TO EVACUATE/SHELTER NON-ESSENTIAL PERSONNEL:</p> <p>a) Ask SEM for duration of release</p> <p>b) Determine onsite exposure of non-essential personnel:</p> <p>1) Ask RPS for results of plant surveys and samples</p> <p>2) Check TEDE dose in occupied areas of station</p> <p>3) Determine radioiodine dose commitment from concentration (<math>\mu\text{Ci/cc}</math>) based on air sample data and exposure duration:</p> <p style="text-align: center;">_____ <math>\mu\text{Ci/cc}</math> x <math>1.57\text{E}+6</math> x _____ hrs = _____ Rem</p> <p>c) Check results indicate onsite exposure greater than or equal to the following:</p> <ul style="list-style-type: none"> <li>• 1 Rem TEDE</li> </ul> <p style="text-align: center;"><u>OR</u></p> <ul style="list-style-type: none"> <li>• 5 Rem Thyroid CDE</li> </ul> <p>d) Recommend that the SEM evacuate non-essential personnel</p> <p style="text-align: center;">(STEP 35 CONTINUED ON NEXT PAGE)</p>	<p>c) Do one of the following:</p> <ul style="list-style-type: none"> <li>• <u>IF</u> exposure greater than 0.5 Rem TEDE or 1 Rem Thyroid CDE, <u>THEN</u> recommend sheltering</li> </ul> <p style="text-align: center;"><u>AND</u></p> <p style="text-align: center;">RETURN TO Step 25</p> <p style="text-align: center;"><u>OR</u></p> <ul style="list-style-type: none"> <li>• <u>IF</u> exposure less than 0.5 Rem TEDE and 1 Rem Thyroid CDE, <u>THEN</u> RETURN TO Step 25</li> </ul>	

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <hr/> <b>PAGE</b> 26 of 27
----------------------------	---	--

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
35	EVALUATE NEED TO EVACUATE/SHELTER NON-ESSENTIAL PERSONNEL: (Continued)  e) Assist in evacuation planning: 1) Review offsite release assessments 2) Check plume direction 3) Determine appropriate evacuation route and remote assembly area  f) Have RPS assign EPIP-4.21, EVACUATION AND REMOTE ASSEMBLY AREA MONITORING  g) Keep SEM informed about Emergency Assembly Area monitoring status  h) RETURN TO Step 25	
_____ 36	BRIEF SEM AND RPS ON EMERGENCY STATUS AND RADIOLOGICAL TRENDS	
_____ 37	CHECK IF EMERGENCY HAS BEEN TERMINATED	RETURN TO Step 11.
_____ 38	NOTIFY RPS AND RAC OF EVENT TERMINATION	
_____ 39	CONSIDER EXTENDED USE OF MONITORING TEAMS FOR DATA COLLECTION	

<b>NUMBER</b> EPIP-4.01	<b>PROCEDURE TITLE</b> RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	<b>REVISION</b> 17 <b>PAGE</b> 27 of 27
----------------------------	---	--

**STEP**

**ACTION/EXPECTED RESPONSE**

**RESPONSE NOT OBTAINED**

\_\_\_\_ 40 REVIEW RECOVERY PHASE PARAMETERS  
WITH SEM:

- Access control to outside contaminated areas
- Return to normal access control throughout site
- Additional HP support personnel
- Radwaste packaging and disposal
- Assistance with decontamination

\_\_\_\_ 41 TERMINATE EPIP-4.01:

- Give completed EIPs, forms, and other applicable records to the Nuclear Emergency Preparedness (TSC Emergency Procedures Coordinator if TSC activated)
- By: \_\_\_\_\_
- Date: \_\_\_\_\_
- Time: \_\_\_\_\_

-END-



NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.01	RADIOLOGICAL DATA WORKSHEET	17
ATTACHMENT		PAGE
1		1 of 1

DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

UNIT: \_\_\_\_\_

Meteorological Data:

WIND DIRECTION (from): \_\_\_\_\_

SECTORS AFFECTED: \_\_\_\_\_

WIND SPEED (mph): \_\_\_\_\_

PRECIPITATION: \_\_\_\_\_

STABILITY CLASS: \_\_\_\_\_

RADIATION SYSTEM MONITORING DATA

VENT VENT A (VG-104) \_\_\_\_\_ cpm (VG-179) \_\_\_\_\_  $\mu$ Ci/sec

VENT VENT B (VG-113) \_\_\_\_\_ cpm (VG-180) \_\_\_\_\_  $\mu$ Ci/sec

PROCESS VENT (GW-102) \_\_\_\_\_ cpm (GW-178) \_\_\_\_\_  $\mu$ Ci/sec

AIR EJECTOR (SV-121) \_\_\_\_\_ cpm (SV-221) \_\_\_\_\_ cpm

VENT VENT A (VG-174) \_\_\_\_\_ mR/hr

VENT VENT B (VG-175) \_\_\_\_\_ mR/hr

PROCESS VENT (GW-173) \_\_\_\_\_ mR/hr

mR/hr

MAIN STEAM: (MS-170) \_\_\_\_\_ (MS-171) \_\_\_\_\_ (MS-172) \_\_\_\_\_

(MS-270) \_\_\_\_\_ (MS-271) \_\_\_\_\_ (MS-272) \_\_\_\_\_

AFPT: (MS-176) \_\_\_\_\_ (MS-276) \_\_\_\_\_

CONTAINMENT MONITORS:

R/hr

(RMS-161) \_\_\_\_\_ (RMS-164) \_\_\_\_\_ (RMS-261) \_\_\_\_\_ (RMS-264) \_\_\_\_\_

(RMS-162) \_\_\_\_\_ (RMS-165) \_\_\_\_\_ (RMS-262) \_\_\_\_\_ (RMS-265) \_\_\_\_\_

(RMS-163) \_\_\_\_\_ (RMS-166) \_\_\_\_\_ (RMS-263) \_\_\_\_\_ (RMS-266) \_\_\_\_\_