VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

February 21, 2001

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555-0001

Serial No. 01-070
SS&L/BAG R0
Docket No. 50-280
50-281
License No. DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
REVISIONS TO EMERGENCY PLAN IMPLEMENTING PROCEDURES

Pursuant to 10 CFR 50.54(q), enclosed are revisions to two Surry Power Station Emergency Plan Implementing Procedures. The revisions do not implement actions which 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 the enclosed tabulation of changes.

In addition to the two revised procedures, an administrative correction was made to EPIP-4.01, revision 16. The response not obtained column for Step 14 incorrectly directed the user to step 17 rather than step 18. The corrected procedure is provided as a replacement to the procedure sent in a letter dated April 26, 2000 (Serial No. 00-236).

Very truly yours,

R. H. Blount, Site Vice President
Surry Power Station

Enclosure

Commitments contained in this letter: None.

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

Mr. R. A. Musser
NRC Senior Resident Inspector
Surry Power Station

A045

Serial No. 01-070
Surry EPIP Revisions

VIRGINIA ELECTRIC AND POWER COMPANY
REVISION TO SURRY POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

Enclosed are revisions to Surry Power Station Emergency Plan Implementing Procedures. Please take the following actions in order to keep your manual updated with the most recent revisions.

REMOVE AND DESTROY:	EFFECTIVE DATE:	INSERT:	EFFECTIVE DATE:
EPIP-4.30, Rev. 7	07/22/99	EPIP-4.30, Rev. 8	01/25/01
EPIP-4.33, Rev. 3	04/27/98	EPIP-4.33, Rev. 4	01/25/01

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

VIRGINIA POWER
SURRY POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.01	RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE (With 1 Attachment)	16
		PAGE 1 of 30

PURPOSE

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

ENTRY CONDITIONS

Activation by EPIP-1.01, EMERGENCY MANAGER CONTROLLING PROCEDURE.

Approvals on File

Effective Date 04/19/00

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 1	INITIATE PROCEDURE: • By: _____ Date: _____ Time: _____	
	NOTE: • During the initial stages of an emergency, the Operations Shift Supervisor may assume the Station Emergency Manager (SEM) position and the HP Shift Supervisor may assume the Radiological Assessment Director (RAD) position. The RAD may report to the Control Room if the TSC is not activated. • Notification of an Alert or higher emergency classification is normally made via Gai-Tronics. The SEM normally informs the RAD of a Notification of Unusual Event declaration via telephone.	
_____ 2	ASK SEM FOR BRIEFING: • Existing plant conditions • Emergency Action Levels (EALs) exceeded • Emergency Classification	
_____ 3	CHECK IF OFFSITE RELEASE - IS OCCURRING OR HAS OCCURRED	GO TO Step 5.
_____ 4	DIRECT INITIATION OF EPIP-4.30, USE OF MIDAS CLASS A MODEL	IF MIDAS NOT available, THEN evaluate release using desk-top calculations: • EPIP-4.08, INITIAL OFFSITE RELEASE ASSESSMENT • EPIP-4.09, SOURCE TERM ASSESSMENT • EPIP-4.10, DETERMINATION OF X/Q

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 5	CHECK EMERGENCY CLASSIFICATION - NOTIFICATION OF UNUSUAL EVENT	GO TO Step 7.
_____ 6	CHECK HP SUPPORT - REQUIRED	IF HP support NOT immediately required, THEN standby to provide support AND GO TO Step 7 when support is required OR WHEN emergency is terminated, THEN GO TO Step 32.
_____ 7	EVALUATE ASSIGNING EPIP-4.02, RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	
_____ 8	PROVIDE SUPPORT FOR EMERGENCY OPERATING PROCEDURE (EOP) AND ACCIDENT MITIGATION TASK ACTIVITIES, AS NECESSARY: a) Notify RPS when an EOP or Accident Mitigation Task is planned or in progress b) Make sure priority is given to expediting EOP and Accident Mitigation Task activities	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 9 CHECK EVENT - LIMITING FAULT: GO TO Step 14.

- LOCA - GO TO NOTE prior to Step 10
- Main Steam Line Rupture - GO TO NOTE prior to Step 11
- Steam Generator Tube Rupture - GO TO Step 12
- Fuel Handling Accident - GO TO NOTE prior to Step 13

NOTE: A LOCA may not initially result in a large release, but may produce a large potential for release from containment.

_____ 10 INITIATE RESPONSE TO LOCA:

a) Ask SEM to evacuate Auxiliary Building and Safeguards

b) Block entry until surveys confirm radiological hazards

c) Evaluate manpower support for Post Accident Containment Air or Reactor Coolant sampling

d) Determine crane wall radiation monitor reading

e) GO TO Step 14

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: Potential releases from a Main Steam Line Rupture may develop from Containment, Main Steam Safety or AFWPT exhaust.

_____ 11 INITIATE RESPONSE TO MAIN STEAM LINE RUPTURE:

a) Check station ventilation effluent monitors

b) Ask SEM for the following data:

- Location of steam break
- Status of actual or potential Main Steam Safety Valve lift
- Number valves lifted: _____
- Length of time valves remained open (if lifted):_____(min.)
- AFWPT status
- Main Steam and AFWPT exhaust monitor readings
- Assistance in flow rate (lbs/hr) determination

c) GO TO Step 14

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 12	INITIATE RESPONSE TO STEAM GENERATOR TUBE RUPTURE: a) Ask SEM for the following data: • Status of Air Ejector divert • Number of Main Steam Relief Valves lifted or that may potentially lift:_____ • Length of time valves remained open (if lifted):_____ min. • Assistance in flow rate (lbs/hr) determination • Status of Main Steam supply to AFWPT • Steam Generator Blowdown status	
	b) Check steam supply to AFWPT - ISOLATED	b) IF steam supply to AFWPT NOT isolated, THEN ask SEM to initiate isolation.
	c) Ask SEM place personnel in Emergency Switchgear Room to report Main Steam and AFWPT exhaust monitor readings	

(STEP 12 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

12 INITIATE RESPONSE TO STEAM GENERATOR TUBE RUPTURE: (Continued)

d) Consider blocking access to the following areas until surveyed:

- Service Building Hallway
- Turbine Deck
- Steam Generator Blowdown Cooler, Turbine Building Basement
- Steam Generator Blowdown lines, Auxiliary Building Basement
- Relief Valves, Safeguards Roof
- AFWPT exhaust, Unit #1 or #2 alleyway
- Condensate Polishing Building

e) Evaluate sampling:

- Steam Generator Blowdowns
- Air Ejectors
- Main Steams

f) GO TO Step 14

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: Analysis of accidents involving decayed spent fuel should include consideration of onsite skin dose due to Kr-85.

_____ 13 INITIATE RESPONSE TO FUEL HANDLING ACCIDENT:

a) Check event - Fuel cask drop or suspected seal leak — a) GO TO Step 13.d.

b) Evaluate the following:

- Access control in affected area
- Neutron monitoring
- Air sampling to confirm fission product release

c) GO TO Step 14

d) Do the following for Fuel Handling Accident in Spent Fuel Pool or Containment:

1) Ask SEM to evacuate all non-essential personnel from Fuel Building and affected Containment

2) Isolate purge of affected Containment

3) Consider potential radiological problems with Reactor Cavity or Spent Fuel Clean-up System

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- Additional manpower may be needed to assist in offsite dose calculations.
- Initial offsite release assessments should be made using EPIP-4.30, USE OF MIDAS CLASS A MODEL, to quickly assess the release and to recommend protective measures.

_____ 14	CHECK EVENT - RADIOLOGICAL RELEASE:	GO TO Step 18.
	a) Initiate effluent sampling if manpower permits	a) Use monitor readings for follow-up assessment.
	b) Give consideration to initiating EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE	
	c) Initiate EPIP-4.30, USE OF MIDAS CLASS A MODEL	c) IF MIDAS NOT available, THEN evaluate release using desk-top calculations: • EPIP-4.08, INITIAL OFFSITE RELEASE ASSESSMENT • EPIP-4.09, SOURCE TERM ASSESSMENT • EPIP-4.10, DETERMINATION OF X/Q
	d) Consider having RPS prepare for dispatch of Offsite Monitoring Teams: • Team assembly • Preparation of equipment and vehicles	
	e) Direct initiation of 40CFR302 EPA Notification Requirements and Reportable Quantity calculations in accordance with normal HP procedures	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 15 VERIFY EMERGENCY CLASSIFICATION:

a) Check results of offsite release assessment at Site Boundary greater than or equal to the following:

- 50 mR/hr TEDE

OR

- 250 mR/hr Thyroid CDE

a) GO TO Step 16.

b) Get estimate of current or potential release duration (hours) from SEM

b) IF estimate NOT available, THEN assume 2 hours.

c) Calculate projected dose:

Duration (hours) x Dose Rate = Projected Dose

d) Confirm emergency classification:

RESULTS OF CALCULATION	EMERGENCY CLASSIFICATION
Projected dose greater than or equal to 1 Rem TEDE or 5 Rem Thyroid CDE	General Emergency
Projected dose greater than or equal to 0.1 Rem TEDE or 0.5 Rem Thyroid CDE	Site Area Emergency
% Technical Specifications greater than or equal to 1000%	Alert
% Technical Specifications greater than or equal to 100%	Notification of Unusual Event
Below 100% Technical Specifications	N/A

e) Notify SEM of emergency classification

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 16	DETERMINE OFFSITE PROTECTIVE MEASURES FOR GENERAL EMERGENCY CLASSIFICATION: a) Use Site Boundary 2, 5 and 10 mile TEDE and Thyroid CDE doses from EPIP-4.30, USE OF MIDAS CLASS A MODEL b) Initiate EPIP-4.07, PROTECTIVE MEASURES c) Make recommendations to SEM that address the following: • Protective measures offsite • Distance protective measures are required	IF classification NOT a General Emergency, THEN GO TO Step 17. a) IF MIDAS NOT available, THEN use dose rates from desk-top calculations: • EPIP-4.08, INITIAL OFFSITE RELEASE ASSESSMENT • EPIP-4.09, SOURCE TERM ASSESSMENT • EPIP-4.10, DETERMINATION OF X/Q

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 17	CHECK LEOF (CEOF) HAS LEAD FOR OFFSITE DOSE ASSESSMENT	Do the following: a) Assure dose assessment result identification number recorded on all pages. b) Record initials on each page to document approval for issuance of results. c) Review offsite release assessment results with SEM. d) Give applicable dose assessment report to State/Local Emergency Communicator: • MIDAS Radiological Status Report (2 pages). • EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE, Attachment 1. e) Provide updated dose assessment results when any of the following occur: • Every 60 minutes during Alert or higher classification. • Within 15 minutes after a classification change. • Change in radiological conditions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: The following response actions may have to be coordinated by the RAD. These actions are not listed in order of priority.

_____ 18 EVALUATE HP RESPONSE ACTIONS

AND

DETERMINE RESPONSES ON A PRIORITY BASIS:

- Offsite monitoring: GO TO NOTE prior to Step 19
- Injured contaminated personnel: GO TO NOTE prior to Step 20
- Inplant / Onsite radiological assessment: GO TO NOTE prior to Step 21
- TSC activated, establish organization: GO TO Step 22
- Offsite release assessment: GO TO Step 23
- Evacuate non-essential personnel: GO TO Step 24
- Activate LEOF: GO TO Step 25
- Dosimetry for offsite assistance (Fire, rescue squads): GO TO Step 26
- Respiratory Protection: GO TO Step 27
- Relief: GO TO Step 28
- Limiting Fault event (LOCA, Main Steam Line Break, SGTR or Fuel Handling Accident): RETURN TO Step 9
- Radiological release: RETURN TO Step 14

WHEN all necessary response actions addressed, THEN GO TO Step 29.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- A minimum of 2 (two) Offsite Monitoring Teams must be dispatched (i.e., sent into the field) at a Site Area Emergency or General Emergency.
- Plume tracking/offsite monitoring will be the responsibility of the Radiological Assessment Coordinator (RAC) upon LEOF activation.

_____ 19 EVALUATE NEED FOR OFFSITE MONITORING:

a) Consult with Dose Assessment Team Leader:

- Meteorological conditions
- Number of teams needed
- Need for protective clothing
- Projected Whole Body and Thyroid dose rates
- Respiratory protection
- Team location and placement

(STEP 19 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

19 EVALUATE NEED FOR OFFSITE MONITORING: (Continued)

b) Check if TEDE exposure is expected to exceed 5 Rem:

b) GO TO Step 19.c.

- Do calculation using sample results, MIDAS runs or default TEDE/DDE ratio table:

FORMULA:

Exposure time x Dose rate x Ratio TEDE/DDE = Estimated TEDE dose
_____ hours x _____ Rem/hr x _____ Ratio = _____Rem TEDE

TEDE/DDE RATIO TABLE:

ACCIDENT TYPE	RATIO	ACCIDENT TYPE	RATIO
MSLB	49	VCT Rupture	1
SGTR	26	LOCA (Melt, Gap, PC)	3
Fuel Handling	1.5	Locked Rotor	13
WGDT Rupture	1	SRF	1

- Consider placing team further downwind

- Consider initiation of EPIP-4.04, EMERGENCY PERSONNEL RADIATION EXPOSURE

(STEP 19 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

19 EVALUATE NEED FOR OFFSITE MONITORING: (Continued)

c) Check if Thyroid CDE expected to exceed 25 Rem:

c) GO TO Step 19.d.

1) Do calculation using concentration (µCi/cc) based on survey results and actual or projected exposure duration (hours):

_____µCi/cc x 1.57E+6 x _____hours = _____Rem THY CDE

2) Ask SEM for approval to administer radioprotective drugs

3) Consider initiation of EPIP-5.07, ADMINISTRATION OF RADIOPROTECTIVE DRUGS

d) Notify RPS of resource and equipment requirements:

- Number teams required
- Protective clothing required
- Respiratory protection required
- Have teams assemble equipment and vehicles

AND

Have teams notify TSC via radio prior to dispatch

e) RETURN TO Step 18

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: First aid considerations must be given priority over decontamination efforts.

_____ 20 INITIATE RESPONSE TO CONTAMINATED INJURED INDIVIDUAL:

a) Determine the following information:

- Offsite medical treatment - REQUIRED
- Contamination survey confirms personnel contamination
- Clothing removal cannot be used to clear individual

b) Check data indicates need to transport contaminated personnel to hospital

b) RETURN TO Step 18.

c) Have RPS direct initiation of normal HP procedures for response to contaminated injured personnel

d) Have HP representative accompany victim

e) RETURN TO Step 18

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: Inplant/Onsite monitoring teams shall be used to assess radiological conditions within the site boundary and to accompany Damage Control, Sample Analysis and Post Accident Sample Teams.

_____ 21 INITIATE INPLANT/ONSITE RADIOLOGICAL ASSESSMENT:

a) Consult with RPS:

- Plant conditions
- Equipment failure
- Elevated radiation monitor readings
- Radiological release points, plume direction and affected areas
- Access control points established
- Recent survey results

b) Help RPS select the following:

- Monitoring and sample locations
- Protective clothing and respiratory protection
- Dosimetry and monitoring devices

(STEP 21 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
21	INITIATE INPLANT/ONSITE RADIOLOGICAL ASSESSMENT: (Continued)	
	c) Check if survey results (µCi/cc) and exposure time indicate exposure greater than 25 Rem Thyroid CDE:	c) GO TO Step 21.d.
	1) Do calculation: _____µCi/cc x 1.57E+6 x _____hours = _____Rem THY CDE	
	2) Consider use of SCBA	
	3) Ask SEM for approval to administer radioprotective drugs	
	4) Initiate EPIP-5.07, ADMINISTRATION OF RADIOPROTECTIVE DRUGS	
	5) Get supply of drugs from TSC closet	

(STEP 21 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

21 INITIATE INPLANT/ONSITE RADIOLOGICAL ASSESSMENT: (Continued)

d) Check if projected TEDE exposure exceeds 5 Rem:

d) GO TO Step 21.e.

- Do calculation using sample results, MIDAS runs or default TEDE/DDE ratio table:

FORMULA:

Exposure time x Dose rate x Ratio TEDE/DDE = Estimated TEDE dose
_____ hours x _____ Rem/hr x _____ Ratio = _____Rem TEDE

TEDE/DDE RATIO TABLE:

ACCIDENT TYPE	RATIO	ACCIDENT TYPE	RATIO
MSLB	49	VCT Rupture	1
SGTR	26	LOCA (Melt, Gap, PC)	3
Fuel Handling	1.5	Locked Rotor	13
WGDT Rupture	1	SRF	1

- Initiate EPIP-4.04, EMERGENCY PERSONNEL RADIATION EXPOSURE

e) Check if entry required to monitor Damage Control Teams:

e) GO TO Step 21.f.

- Brief RPS on planned activity
- Verify team briefing prior to dispatch

(STEP 21 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
21	INITIATE INPLANT/ONSITE RADIOLOGICAL ASSESSMENT: (Continued)	
	f) Determine if radiological conditions require monitoring of emergency response facilities: • Have RPS initiate EPIP-4.17, MONITORING OF EMERGENCY RESPONSE FACILITIES • Have RPS initiate EPIP-4.18, MONITORING OF LEOF	f) GO TO Step 21.g.
	g) WHEN Post Accident Primary Coolant or Containment Air sample requested, THEN do the following: 1) Determine system to be used: • Normal sampling systems OR • Post Accident Sampling System (results may take up to 3 hours) 2) Notify RPS of preferred sampling system 3) Ask RPS to support Post Accident sampling	g) GO TO Step 21.h.

(STEP 21 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
21	INITIATE INPLANT/ONSITE RADIOLOGICAL ASSESSMENT: (Continued)	
	h) WHEN radiological release and plume direction changes or release increases, THEN do the following: • Notify RPS • Consider need for re-surveys • Direst establishment of new access control points based on revised survey data	h) RETURN TO Step 18.
	i) RETURN TO Step 18	
_____ 22	ESTABLISH EMERGENCY ORGANIZATION:	
	a) Establish Dose Assessment Team: • Assign one team leader and two team members • Assign EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE	
	b) Establish Radiation Protection Supervisor position AND Assign EPIP-4.02, RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	
	c) RETURN TO Step 18	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 23	REVIEW OFFSITE RELEASE ASSESSMENTS:	
	a) Check radiological monitoring and meteorological parameters available to Dose Assessment Team from ERFCS (MIDAS imports ERFCS automatically)	a) IF parameters NOT available from ERFCS, THEN give completed copy of Attachment 1 to Dose Assessment Team.
	b) Review offsite release assessments	b) RETURN TO Step 18.
	c) RETURN TO Step 15	
_____ 24	EVALUATE NEED TO EVACUATE/SHELTER NON-ESSENTIAL PERSONNEL:	
	a) Determine onsite exposure of non-essential personnel:	
	1) Review plant surveys and samples	
	2) Calculate iodine dose commitment using radioiodine concentration (µCi/cc) based on air sample data and actual or projected exposure duration (hours):	
	_____µCi/cc x 1.57E+6 x _____hours = _____Rem THY CDE	

(STEP 24 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
24	EVALUATE NEED TO EVACUATE/SHELTER NON-ESSENTIAL PERSONNEL: (Continued)	
	b) Check if results indicate onsite exposure of non-essential personnel greater than 1 Rem TEDE or 5 Rem Thyroid CDE	b) Do one of the following: • IF onsite exposure for non-essential personnel greater than or equal to 0.5 Rem TEDE or 1 Rem Thyroid CDE, THEN recommend sheltering AND GO TO Step 24.d OR • IF onsite exposure for non-essential personnel less than 0.5 Rem TEDE or 1 Rem Thyroid CDE, THEN GO TO Step 24.d
	c) Make recommendation to SEM for evacuation of non-essential personnel	
	d) Consider early release of personnel upon Alert if plant conditions appear to degrade	
	e) Do the following if non-essential personnel are to be evacuated: • Review offsite release assessments • Check direction of plume • Determine appropriate evacuation route and remote assembly area	e) RETURN TO Step 18.

(STEP 24 CONTINUED ON NEXT PAGE)

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

24 EVALUATE NEED TO EVACUATE/SHELTER NON-ESSENTIAL PERSONNEL: (Continued)

f) Have RPS assign EPIP-4.21, EVACUATION AND REMOTE ASSEMBLY AREA MONITORING

g) Have RPS do the following:

1) Tell survey team to notify TSC when departing from station and arriving at Remote Assembly Area

2) Dispatch Remote Assembly Area monitoring team

h) Notify SEM of Emergency Assembly Area monitoring status

i) RETURN TO Step 18

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 25 INITIATE LEOF ACTIVATION:

a) Give information to Radiological Assessment Coordinator:

- Existing plant conditions
- Current offsite dose projections
- HP actions underway

b) Have Dose Assessment Team Leader brief Radiological Assessment Coordinator:

- Status and location of Offsite Monitoring Teams
- Meteorological data
- Radiation Monitoring System data
- Sample analysis data

c) Have RPS assign EPIP-4.18, MONITORING OF LEOF

d) RETURN TO Step 18

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 26 HAVE DOSIMETRY ISSUED TO OFFSITE RESPONDERS:

a) Consult with RPS:

- Arrival time of offsite support (fire, rescue squads)
- Dosimetry requirements

b) Ask RPS to consider having individual meet fire or rescue squad prior to entry onsite in order to supply dosimetry

c) RETURN TO Step 18

_____ 27 EVALUATE RESPIRATORY PROTECTION REQUIREMENTS:

a) Assess results of air sample analyses

b) Recommend relocation of non-essential personnel from areas where high airborne activity is expected or airborne activity > 0.30 DAC

c) Initiate EPIP-4.05, RESPIRATORY PROTECTION

d) RETURN TO Step 18

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 28 GIVE TURNOVER TO RELIEF:

a) WHEN a more senior HP individual arrives onsite

OR

WHEN relief is needed, THEN brief successor:

- Existing plant conditions
- Emergency Classification
- Offsite release assessments
- HP actions underway

b) Notify SEM of change in position

c) Stay with relief for about 30 minutes to ensure proper turnover

d) RETURN TO Step 18

_____ 29 CHECK EMERGENCY - CONTINUES — GO TO Step 32.

_____ 30 CONSULT WITH SEM AND RPS AS TO INCREASING OR DECREASING TRENDS

_____ 31 RETURN TO NOTE PRIOR TO STEP 2

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 32 INITIATE EVENT TERMINATION AND RECOVERY ACTIONS:

a) Verify SEM declared event - TERMINATED

b) Notify RPS and RAC of event termination

c) Evaluate continued use of monitoring teams for data collection

d) Consult with SEM about recovery phase:

- Access control to outside contaminated areas
- Return to normal access control areas throughout site
- Assistance requirements:
  - Decontamination efforts
  - HP support personnel
  - Radwaste packaging and disposal

_____ 33 INITIATE REPLACEMENT OF PROCEDURES AND EMERGENCY EQUIPMENT

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 34	TERMINATE EPIP-4.01: • Give completed EPIP-4.01, forms and other applicable records to the Emergency Procedures Coordinator in the TSC • Completed by: _____ Date: _____ Time: _____ -END-	• Give to STA.

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.01	RADIOLOGICAL DATA WORKSHEET	16
ATTACHMENT 1		PAGE 1 of 1

Name:_____; Date:_____; Time:_____

METEOROLOGICAL DATA

Wind Direction (from): _____ Stability Class: _____

Affected Sectors: _____ Precipitation: _____

Wind Speed (mph): _____

RADIATION SYSTEM MONITORING DATA

Vent Vent: VG-110:_____cpm VG-131:_____µCi/sec
_____µCi/cc
VG-123:_____mR/hr

Process Vent: GW-102:_____cpm GW-130:_____µCi/sec
_____µCi/cc
GW-122:_____mR/hr

Containment, Inside:

High Range: RMS-127:_____mR/hr RMS-227:_____mR/hr

RMS-128:_____mR/hr RMS-228:_____mR/hr

Containment, Outside:

High Range: RMS-161:_____mR/hr RMS-261:_____mR/hr

Air Ejector: SV-111:_____cpm SV-211:_____cpm

Main Steam: MS-124:_____mR/hr MS-224:_____mR/hr

MS-125:_____mR/hr MS-225:_____mR/hr

MS-126:_____mR/hr MS-226:_____mR/hr

AFWPT: MS-129:_____mR/hr MS-229:_____mR/hr

VIRGINIA POWER
SURRY POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.30	USE OF MIDAS CLASS A MODEL (With 2 Attachments)	8 PAGE 1 of 21

PURPOSE

To provide instructions for execution of the MIDAS Class A Model.

ENTRY CONDITIONS

Any one 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 Radiological Assessment Director or Radiological Assessment Coordinator.

Approvals on File

Effective Date 01/25/01

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- Dose assessments should be performed within 15 minutes after a radiological release. MIDAS may underestimate the effects of a release which begins or ends during the current 15-minute period.
- An abnormal run is one in which a red bar containing messages that meteorological or radiation monitor data is missing appears on the screen.
- Pressing the DIALOG key causes the terminal to display three lines of text and allows the operator to read system messages during a run.
- Attachment 2, Design Basis Accident Technical Overview, provides assumptions and default values used in the MIDAS code and EPIPs.

_____ 1 INITIATE PROCEDURE:

a) By:_____
Date:_____
Time:_____

b) Press START/STOP button (the top button near the lower right front of terminal)

c) Ensure STOP/START button stays in the engaged position

d) Press LOCK key on the keyboard

e) Verify LOCK and TEK indicating lights - ON

e) Do the following:

1) Notify RAD/RAC MIDAS terminal malfunctioning.

2) Initiate Attachment 1.

f) Verify MIDAS in one of the following locations being used:

- Surry HP Office
- Surry TSC
- Surry LEOF

f) IF in CEOF, THEN ensure "Black Box" ABC switch positioned to "B" for Surry.

g) Verify - INITIAL MIDAS RUN

g) GO TO Step 5.

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
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- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 2	DO INITIAL ASSESSMENT:	
	a) Press RETURN	
	b) Verify USERNAME displayed	b) IF "Local>" appears, THEN type C SMIDAS and RETURN TO Step 2.a. IF message "Local-715 or Local-013" appears, THEN do the following: 1) Press CTRL K keys. 2) WHEN "Local>" appears, THEN type C NMIDAS. 3) Wait for USERNAME to appear. 4) IF USERNAME appears, THEN do the following: a) GO TO Step 2.c. b) Continue using manually entered monitor and met data. IF USERNAME does NOT appear, THEN do dose assessment using manual EPIPs.
	c) Type MIDAS	
	d) Press RETURN	
	e) Verify MIDAS in one of the following locations being used: • Surry HP Office • Surry TSC • Surry LEOF	e) IF in CEOF, THEN do the following: 1) Type SU (Surry Site ID). 2) Press RETURN.

(STEP 2 CONTINUED ON NEXT PAGE)

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
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- WEATHER SELECTION (CONFIRM, RESET)
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1. TERMINAL INTERFACE CRITERIA

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a) Do not touch the screen when prompted to do so by the procedure.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
2	DO INITIAL ASSESSMENT: (Continued)	
	f) WHEN the following prompt appears ENTER: [S1] SURRY 1 [S2] SURRY 2 [R1] SURRY 1 TREND [R2] SURRY 2 TREND [EX] EXIT THEN type appropriate unit (S1 or S2)	
	g) Press RETURN	
	h) WHEN the following prompt appears [XX] FUNCTION OR TASK CODE [XXX] FUNCTION AND TASK CODE [FM] FUNCTION MENU [CTRL-Z] EXIT THEN type TS (touch screen)	
	i) Press RETURN	
	j) Verify MIDAS connected to Surry VAX	j) IF MIDAS is connected to North Anna VAX (i.e., connection made using C NMIDAS), THEN GO TO Step 6.
	k) Check if quick assessment desired	k) GO TO Step 5.
	l) Touch REAL TIME QUICK DOSE PROJECTIONS on the ACCIDENT RUN MENU SELECTION screen	
	m) Touch CONFIRM	

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
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3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- Meteorological (MET) parameters with good values are backlit in gray with their value under the parameter name.
- Rate of rainfall (inches per 15 minutes) may be obtained from the Virginia Power Weather Center (Innsbrook, 8-730-3025). Zero (0) may be entered if data is not available. However, using zero during periods of rainfall may yield unrepresentative results.
- The Stability Class letter designator (A-G) should be used in lieu of a Delta T numerical value. This is preferred because numerical values must be entered in °F, but station monitoring systems display the parameter in °C.
- EPIP-4.10, Determination of X/Q, contains instructions for getting meteorological information, e.g. inches rainfall, when on-site measurements unavailable.

_____ 3 ENTER METEOROLOGICAL DATA:

a) Check gray boxes - APPEAR — a) GO TO Step 3.f.

b) Touch RAIN box

c) Put in rate of rainfall (inches per 15 minutes)

d) Touch CONFIRM

e) GO TO Step 3.j

f) Do one of the following:

- Use LAST MET and touch each box to activate parameter

OR

- Touch box for each MET parameter to be entered and put in value using the NUM pad

g) Verify the entered value appears under the parameter name — g) Enter parameter value again.

(STEP 3 CONTINUED ON NEXT PAGE)

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- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
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1. TERMINAL INTERFACE CRITERIA

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

3 ENTER METEOROLOGICAL DATA: (Continued)

h) Ensure values for each of the following parameters are entered (touch the appropriate box and enter the value using the NUM pad as needed):

- Delta temperature [enter letter of Stability Class (A-G) in Delta T field]:

DELTA T (°C)	SIGMA THETA (°)	STABILITY CLASS
≤ -0.67	≥ 22.5	A (most unstable)
-0.66 to -0.60	22.4 to 17.5	B
-0.59 to -0.53	17.4 to 12.5	C
-0.52 to -0.18	12.4 to 7.5	D
-0.17 to +0.53	7.4 to 3.8	E
+0.54 to +1.41	3.7 to 2.1	F
> +1.41	< 2.1	G (most stable)

- Upper and lower wind speed (mph)
- Lower wind direction (degrees)
- Ambient temperature (°F)
- Rain (inches per 15 minutes)

i) Touch CONFIRM after all MET parameters are correctly entered

(STEP 3 CONTINUED ON NEXT PAGE)

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

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• Surry release points are assigned as follows:

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1. TERMINAL INTERFACE CRITERIA

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WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	3 ENTER METEOROLOGICAL DATA: (Continued)	
	j) Verify run proceeds into calculation mode	j) IF Red Warning message appears (i.e., rad monitor data invalid), THEN do the following: 1) Touch EXIT. 2) RETURN TO Step 2.j.
_____	4 GET REPORTS:	
	a) Check if SPECIAL REPORT appears following calculation routine	a) IF DATA RESULT SCREEN appears, THEN touch CONTINUE multiple times to step through data results and calculation routine until the SPECIAL REPORT appears.
	b) Make a print of SPECIAL REPORT (touch "D COPY/S COPY")	
	c) Touch CONTINUE	
	d) WHEN page 1 of the RADIOLOGICAL STATUS REPORT appears, THEN press "D COPY/S COPY"	
	e) Touch CONTINUE	
	f) WHEN page 2 of the RADIOLOGICAL STATUS REPORT appears, THEN press "D COPY/S COPY"	
	g) Touch MORE REPORTS	
	h) Wait for MORE REPORTS SELECTION screen to appear	

(STEP 4 CONTINUED ON NEXT PAGE)

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- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
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- MORE REPORTS SELECTION (CONFIRM, EXIT)

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- Release Point 2: Process Vent
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1. TERMINAL INTERFACE CRITERIA

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2. SCREEN PRINT CRITERIA

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3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4	GET REPORTS: (Continued)	
	i) Check with RAD/RAC about need for the following specific reports (to support State assessments): • MET, RAD, X/Q, DOSE SUMMARY • DOSE/DOSE RATE PLOTS • Additional SPECIAL REPORT • Additional RADIOLOGICAL STATUS REPORT	i) <u>WHEN</u> NO additional reports are needed, <u>THEN</u> do the following: 1) Touch EXIT twice to return to the ACCIDENT RUN MENU SELECTION SCREEN. 2) GO TO Step 15.
	j) Touch box for desired report	
	k) Touch CONFIRM	
	l) Check if REPORT PARAMETER SELECTION screen appears	l) GO TO Step 14.
	m) Set projection time on REPORT PARAMETER SELECTION SCREEN: 1) Touch PROJ. TIME box to scroll to duration specified by RAD/RAC (Use 2-hour default duration if no duration specified) 2) Touch CONFIRM	
	n) GO TO Step 14	

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

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3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: CHRRMS (Unit 1: RMS-127/128, Unit 2: RMS-227/228) readings may be used to select MIDAS LOCA accident type.

HOURS AFTER LOCA	CONTAINMENT HIGH RANGE RADIATION MONITOR READING (R/hr)		
0	≥1.3E+4	≥4.5E+2	≥1.54
1	≥5.0E+3	≥1.8E+2	≥1.3
2	≥3.7E+3	≥1.4E+2	≥1.2
4	≥2.8E+3	≥8.6E+1	≥1.0
MIDAS ACCIDENT TYPE SELECTION	LOCA MELT	LOCA GAP	LOCA PC

_____ 5 DO ENHANCED DOSE ASSESSMENT WITH DEFAULT DATA:

a) Verify MIDAS system default data to be used (i.e., real time meteorological and radiation monitor data, and default accident isotope mix)

b) Touch REAL TIME ENHANCED DOSE PROJECTIONS

c) Touch CONFIRM

d) WHEN the DBA ACCIDENT TYPE SELECTION menu appears, THEN touch the selection box for the accident type designated by the RAD/RAC

e) Touch CONFIRM

f) RETURN TO Step 3

a) GO TO Step 6.

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- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
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1. TERMINAL INTERFACE CRITERIA

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

* *

CAUTION: Only use monitor values from 1-RM-VG-110 or 1-RM-GW-102 if 1-RM-VG-131-1 or 1-RM-GW-130-1 are unavailable. Values for 1-RM-VG-110 and 1-RM-GW-102 must be corrected due to vacuum in the detector chamber by the following equation:

Corrected CPM = Indicated CPM X [30 ÷ (30 - inches Hg)]

* *

NOTE:
- Each input screen will appear with preselected values backlit in white. Changes are made by pressing the appropriate box and using the touch screen keypad in the upper right quadrant on the screen. Keypad entries are entered by touching EN on the keypad. Times between midnight and 0100 must be entered as 2400 through 2459 using the previous date.
- Use of bad radiation monitor or source term data (equal to zero) during a previous run will require selection of a new (different) release option.

_____ 6	USE REAL TIME ALL SCREEN DOSE PROJECTIONS TO DO ENHANCED DOSE ASSESSMENT WITH OPTIONAL OPERATOR INPUT DATA:	
	a) Verify user input is desired for Release Date/Time, Release Option, Monitor Data or Sample Data	a) RETURN TO Step 5.
	b) Touch REAL TIME ALL SCREEN DOSE PROJECTIONS	
	c) Touch CONFIRM	
	d) WHEN MISCELLANEOUS PARAMETERS screen appears, THEN verify default choices are to be used	d) Adjust choices on the MISCELLANEOUS PARAMETERS screen per RAD/RAC instructions OR Touch MANUAL if manual input of weather data is desired.
	e) Touch CONFIRM	

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
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- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
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1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

NOTE: Copying may take over two minutes. Using the CONTROL key with D COPY/S COPY key will produce light text on black background (reverse image), which may improve resolution of maps/isopleths.

2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- Run type is preset to PROJECTED (FORECAST) DOSE.
- PROJECTION TIME (HOURS) is preset to 1, 2, 4 and 8.

_____ 7 INPUT DATE AND TIME INFORMATION:

a) WHEN RUN MODE AND INTEGRATION TIME SELECTION screen appears, THEN verify current date/time to be used

a) IF current date/time NOT to be used, THEN do the following:

1) Touch START DATE OF INTEGRATION and then use the touch screen NUM pad to enter date in the format: MO/DY/YR HR:MN. (MIDAS will provide "/" marks between the pairs of digits for month, day and year, and a colon between the pairs of digits for hours and minutes.)

2) Touch EN when entry is complete.

b) Touch CONFIRM

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: If rad data was bad or the source term data was equal to zero in a previous run, a new release option must be selected different from the one previously selected.

_____ 8 SELECT RELEASE (SOURCE TERM) OPTION:

a) Use RELEASE OPTION SELECTION screen

b) Select one of the following release options:

RELEASE OPTIONS	SELECTION AND TRANSITION STEPS
Radiation monitor data is available for manual entry and/or predictive dose assessment is desired based on a potential release	1) Touch MANUAL ENTRY OF EACH MONITOR READING 2) Touch CONFIRM 3) GO TO Step 9
Radiation monitor data is available from file	1) Touch MONITOR DATA FROM V & F FILE 2) Touch CONFIRM 3) GO TO Step 11
Isotopic release rates are available for manual entry and/or predictive dose assessment is desired based on a potential release	1) Touch MANUAL ENTRY OF ISOTOPE RELEASE RATE 2) Touch CONFIRM 3) GO TO Step 10
Isotopic concentrations and flow rates of each release path are known, and/or predictive dose assessment is desired based on a potential release	1) Touch MANUAL ENTRY OF ISOTOPE CONCENTRATION 2) Touch CONFIRM 3) GO TO Step 10
Design Basis Assident Default (DBA)	1) Touch DEFAULT DBA ACCIDENT 2) Touch CONFIRM 3) GO TO Step 11

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP | ACTION/EXPECTED RESPONSE | RESPONSE NOT OBTAINED

* *

CAUTION:
- Double counting will occur if more than one monitor in each release pathway is entered.
- Default flow rates will automatically be used if flow rates are not entered and may result in overconservative dose projections.

* *

NOTE:
- Monitor readings may be obtained from ERFCS Group Review screens if RMS data is not available to MIDAS.
- Monitor readings from RM-VG-123 (Vent Vent High Range) or RM-GW-122 (Process Vent High Range) may be obtained from Operations if Kaman monitors (RM-VG-131 or RM-GW-130) or Victoreen monitors (RM-VG-110 or RM-GW-102) are offscale or out of service.
- CHRRMS (Unit 1: RMS-127/128, Unit 2: RMS-227/228) readings may be used to select MIDAS LOCA accident type.

HOURS AFTER LOCA	CONTAINMENT HIGH RANGE RADIATION MONITOR READING (R/hr)		
0	≥1.3E+4	≥4.5E+2	≥1.54
1	≥5.0E+3	≥1.8E+2	≥1.3
2	≥3.7E+3	≥1.4E+2	≥1.2
4	≥2.8E+3	≥8.6E+1	≥1.0
MIDAS ACCIDENT TYPE SELECTION	LOCA MELT	LOCA GAP	LOCA PC

_____ 9 ENTER MONITOR DATA MANUALLY:

a) WHEN the DBA ACCIDENT TYPE SELECTION screen appears, THEN select accident type specified by the RAD/RAC

(STEP 9 CONTINUED ON NEXT PAGE)

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

NOTE: Copying may take over two minutes. Using the CONTROL key with D COPY/S COPY key will produce light text on black background (reverse image), which may improve resolution of maps/isopleths.

2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

9 ENTER MONITOR DATA MANUALLY: (Continued)

b) Touch CONFIRM

c) WHEN RADIATION MONITOR READINGS screen appears, THEN do the following:

1) Touch the box for each monitor to be entered (one at a time)

2) Enter radiation and flow values for each monitor using EN on the NUM pad (Enter monitor and flow rate values by making two entries on the NUM pad separated by a comma; e.g., 1E6,25000 for cpm,flow rate)

3) WHEN entry for one monitor is complete, THEN repeat Step 9.c.1 through 9.c.2 until all monitor data is entered

d) WHEN all entries have been made, THEN touch CONFIRM

e) GO TO Step 12

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

NOTE: Copying may take over two minutes. Using the CONTROL key with D COPY/S COPY key will produce light text on black background (reverse image), which may improve resolution of maps/isopleths.

2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- An input is required for each active release point.
- Zero is an acceptable input for radiation level or flow.

_____ 10 ENTER STATION INVENTORY OR SAMPLE DATA:

a) Check if isotopic release RATE is to be used

a) IF isotopic CONCENTRATION is to be entered, THEN do the following:

1) Select each isotope.

2) Enter concentration using the NUM pad.

3) Enter flow rate in bottom box of center column.

4) GO TO Step 10.c

b) Select each isotope

AND

Enter release rates (for each selection) using the NUM pad

c) Touch CONFIRM after all data has been correctly entered

c) IF a data entry error was made, THEN re-enter the correct data using the NUM pad and touch CONFIRM when complete.

d) GO TO Step 12

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
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- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- The UNKNOWN MIX option may not appear on all DBA ACCIDENT TYPE SELECTION screens.
- CHRRMS (Unit 1: RMS-127/128, Unit 2: RMS-227/228) readings may be used to select MIDAS LOCA accident type.

HOURS AFTER LOCA	CONTAINMENT HIGH RANGE RADIATION MONITOR READING (R/hr)		
0	≥1.3E+4	≥4.5E+2	≥1.54
1	≥5.0E+3	≥1.8E+2	≥1.3
2	≥3.7E+3	≥1.4E+2	≥1.2
4	≥2.8E+3	≥8.6E+1	≥1.0
MIDAS ACCIDENT TYPE SELECTION	LOCA MELT	LOCA GAP	LOCA PC

_____ 11 ENTER ACCIDENT TYPE:

a) Verify DBA ACCIDENT TYPE SELECTION screen appears

a) IF accident type screen does NOT appear, THEN GO TO Step 12.

b) Select accident type as specified by RAD/RAC:

- MSLB (Main Steam Line Break)
- SGTR (Steam Generator Tube Rupture)
- FUEL HANDLING
- WGTR (Waste Gas Decay Tank Rupture)

- LOCA - PC (PRI COOL)
- LOCA - GAP
- LOCA - MELT
- LOCKED ROTOR

c) Touch CONFIRM

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 12	ENTER RELEASE TIMING SELECTION:	
	a) Verify NO "abnormal run" occurred	a) IF recovering from an "abnormal run", THEN GO TO Step 13.e.
	b) Check if trip occurred GREATER THAN 15 minutes ago	b) IF time of trip is unknown or within the past 15 minutes, THEN GO TO Step 12.d.
	c) Touch TRIP DATE box on the RELEASE TIMING SELECTION screen and enter date and time of trip using the NUM pad	
	d) Check if time of start of release since trip is known	d) GO TO Step 12.g.
	e) Touch RELEASE START MINS SINCE TRIP box	
	f) Enter number of minutes using the NUM pad	
	g) Check if 120 minute release duration is to be used	g) IF release duration is known, THEN do the following: 1) Touch DURATION box. 2) Enter number of minutes using the NUM pad. 3) GO TO Step 12.i.
	h) Touch DURATION box and enter 120 minutes using the NUM pad	
	i) Touch CONFIRM	
	j) Verify run is proceeding into calculation mode and data result screen appears	j) IF meteorological data is not available and the manual entry screen appears, THEN RETURN TO Step 3. IF error warning messages appear, THEN touch EXIT and RETURN TO Step 2.j.
	k) RETURN TO Step 4	

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 13	RESTART PROCEDURE FOR ABNORMAL RUN:	
	a) Touch REAL TIME ALL SCREENS DOSE PROJECTIONS box on ACCIDENT RUN MENU SELECTION screen	
	b) Touch CONFIRM	
	c) WHEN the next screen requesting run type and time selection information appears, THEN touch CONFIRM without making any changes	
	d) Refer to Step 8 to select a new release option	
	e) Wait for RELEASE TIMING SELECTION screen to appear	
	f) Touch CONFIRM without making any changes	
	g) Verify that the run proceeds into the calculation mode	g) IF meteorological data NOT available and the manual entry WEATHER SELECTION screen appears, THEN RETURN TO Step 3.
	h) RETURN TO Step 4	

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
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- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

NOTE: Copying may take over two minutes. Using the CONTROL key with D COPY/S COPY key will produce light text on black background (reverse image), which may improve resolution of maps/isopleths.

2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- Displays may be graphic or tabular, depending on what was selected in the MORE REPORTS menu. Map features allow the user to put on or take off map overlays using function keys.
- Instructions at the bottom of all graphic and tabular plume menus provide directions on how to move within them.
- Graphic displays of plumes should not be used to determine emergency classifications. Instead, use the printed Special Report information.
- Point of Interest allows the user to select specific points to determine X/Q, dose or dose rate values through the location of the terminal cursor. The cursor is moved using the "joy disk" to any location and then the space bar is toggled to display values.

_____ 14 EVALUATE DISPLAYS:

a) Set map scale:

1) Do one of the following:

- Use default distance (miles)

OR

- Touch MAP SCALE box and enter miles of interest using NUM pad

2) Touch CONFIRM

b) Check use of MAP FEATURES - DESIRED:

b) IF use of map features is NOT desired, THEN GO TO Step 14.c.

1) Touch MAP FEATURES

2) Select (highlight) desired options on screen menu

3) Touch CONFIRM

(STEP 14 CONTINUED ON NEXT PAGE)

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
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- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
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• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
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1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

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2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
14	EVALUATE DISPLAYS: (Continued)	
	c) Check enlargement of selected area of display - DESIRED: 1) Touch SELECT AREA 2) Touch screen at two points bounding the desired area 3) Touch RESTORE when use of this function is complete	c) IF use of SELECT AREA feature is NOT desired, THEN GO TO Step 14.d.
	d) Check use of POINT OF INTEREST feature - DESIRED: 1) Touch POINT OF INTEREST, move cursor to desired location using "joy disk", and toggle the space bar (Place mouse cross-hairs at desired point and click) 2) WHEN POINT OF INTEREST function complete, THEN move cursor to bottom right-hand corner of the plot and press the space bar (Place mouse cross-hairs at bottom right corner of plot and click)	d) IF POINT OF INTEREST feature is NOT desired, THEN GO TO Step 14.e.
	e) Touch CONTINUE	
	f) Touch MORE REPORTS	
	g) RETURN TO Step 4.h	
_____ 15	CHECK IF MIDAS OPERATIONS CAN BE TERMINATED: • Event - TERMINATED • RAD/RAC directs termination of MIDAS operation	RETURN TO Step 5.

NOTE: • MIDAS screen selection boxes include: RESET, CONFIRM and EXIT. RESET clears data entered before initiating a run or returns to previous screen. CONFIRM is selected to continue model processing when all information on screen is correct. EXIT exits the modeling process. Selection touch screens are as follows:

- ACCIDENT RUN MENU SELECTION (CONFIRM, EXIT, RESET)
- MISCELLANEOUS PARAMETERS (CONFIRM, RESET)
- RUN TYPE AND TIME SELECTION (CONFIRM, RESET)
- RELEASE OPTION SELECTION (CONFIRM, RESET)
- DBA ACCIDENT TYPE SELECTION (CONFIRM, RESET)
- RELEASE TIMING SELECTION (CONFIRM, RESET)
- WEATHER SELECTION (CONFIRM, RESET)
- MORE REPORTS SELECTION (CONFIRM, EXIT)

• Surry release points are assigned as follows:

- Release Point 1: Containment and Vent Vent (The expressed flow (EX VEL) for Release Point 1 is "0.00E+00" based on no containment release.)
- Release Point 2: Process Vent
- Release Point 3: Main Steam Safety Valves and AFWPT

1. TERMINAL INTERFACE CRITERIA

IF touch screen feature activated, THEN use touch screen to make entries.

IF a "mouse" is connected to the terminal, THEN do the following when instructed to touch the screen during performance of this procedure:

a) Do not touch the screen when prompted to do so by the procedure.

b) Use the "mouse" to position cross-hairs at desired location on screen.

c) Click the "mouse" after cross-hairs are properly positioned.

NOTE: Copying may take over two minutes. Using the CONTROL key with D COPY/S COPY key will produce light text on black background (reverse image), which may improve resolution of maps/isopleths.

2. SCREEN PRINT CRITERIA

WHEN individual screen print desired, THEN press "D COPY/S COPY" key while screen is displayed.

3. TERMINAL MALFUNCTION RESPONSE CRITERIA

IF terminal malfunctions, THEN have dose projections made from another terminal.

4. TERMINAL LOCK-UP RESPONSE CRITERIA

IF terminal lock-up occurs, THEN refer to Attachment 1 for response actions.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 16 DISENGAGE SYSTEM:

a) Touch EXIT twice on the ACCIDENT RUN MENU SELECTION screen

b) Press "CTRL" and "Z" keys simultaneously

c) WHEN "Local>" appears, THEN type LO

d) Press RETURN

e) Ensure "LOGGED OFF" message appears on screen

f) Press START/STOP button (the top button near the lower right front of terminal)

g) Ensure START/STOP button - DISENGAGED

_____ 17 TERMINATE EPIP-4.30:

- Give completed EPIP-4.30, forms and other applicable records to the Radiological Assessment Director/Coordinator

- By: _____

  Date: _____

  Time: _____

-END-

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.30	RESPONSE TO TERMINAL LOCK-UP	8
ATTACHMENT 1		PAGE 1 of 1

Perform the following actions, in sequence, to recover from terminal or system lock-up. The user may return to the procedure upon recovery (i.e., it is not necessary to complete the entire sequence if operation is restored).

__ 1. Enter the letter "E" AND press RETURN.
IF system accepts commands, THEN RETURN TO procedure.

__ 2. Enter "CTRL Y".
IF system accepts commands, THEN RETURN TO procedure.

__ 3. Press "RESET" on terminal.
IF system accepts commands, THEN RETURN TO procedure.

__ 4. Enter "CTRL Y".
IF system accepts commands, THEN RETURN TO procedure.

__ 5. Turn terminal power OFF and back ON again.
IF system accepts commands, THEN RETURN TO procedure.

__ 6. Enter "CTRL Y".
IF system accepts commands, THEN RETURN TO procedure.

NOTE: The HP and CEOF terminals are normally connected to Server "A".
TSC and LEOF terminals are normally connected to Server "B".

__ 7. Reset the MIDAS terminal servers as follows:
a) Have all users exit MIDAS.
b) Have the power cord for the affected terminal unplugged from the MIDAS terminal server (located in TSC Computer Room MIDAS Cabinet).
c) Plug the power cord back in to the MIDAS terminal server.
d) Wait for approximately 2 minutes while the server loads files from MIDAS and restarts operation. MIDAS will be out of service on at least two terminals during this time.
e) IF system accepts commands, THEN RETURN TO procedure.

__ 8. Connect to backup (alternate) MIDAS system:
a) Reset terminal by turning terminal power OFF and then back ON again.
b) Press CTRL K keys.
c) WHEN the "Local>" prompt appears, THEN type "C NMIDAS". Make sure to put a space between "C" and "NMIDAS".
d) Return to procedure Step 2 and continue procedure using manually entered monitor and meteorological data.

__ 9. Notify the MIDAS System Manager or Code Administrator, and the RAD or RAC.

1. **MAIN STEAM LINE BREAK:**
   - Release duration: 1 hour, with all activity released in first 1/2 hour.
   - Release from faulted line: 2.15E+5 lb-mass/hr.
   - Release from unaffected steam lines: 0 - 2 hours = 38,924 lb-mass/hr per line; 2 - 8 hours = 41,296 lb-mass/hr per line.
   - Primary and secondary side activity: Technical Specification limits at onset of event.
   - Primary to secondary leak rate: Technical Specification limit, 500 gpd in affected generator, and 1440 gpd (1 gpm) total for all 3 steam generators.
   - Iodine partition factors: Faulted S/G = 1; Intact S/Gs = 0.10.
   - Condenser is assumed unavailable and the following release points apply: Broken steam line, intact steam line relief valves, and AFWPT.
   - Activity released from broken steam line is distributed among the other 3 remaining release paths: 2 intact reliefs and AFWPT.
   - Concurrent Iodine spike is 4 hours in duration.
   - 10% of total activity is released via AFWPT. Steam flow to AFWPT: 40.5 lbs/hr per horsepower. Rated power = 710 horsepower. AFWPT total steam flow = 28,755 lbs/hr.

2. **STEAM GENERATOR TUBE RUPTURE:**
   - Release duration: 1 hour.
   - Tubes in the affected steam generator are uncovered at 5 minutes from event initiation, and remain uncovered for 10 minutes.
   - Iodine Partition Factor: 1.0 in affected steam generator; 0.01 in unaffected generators.
   - The affected steam generator is assumed isolated within 30 minutes.
   - Primary and secondary side activity: Technical Specification limits at onset of event.
   - Primary to secondary leak rate: Technical Specification limit, 500 gpd in affected generator, and 1440 gpd (1 gpm) total for all 3 steam generators.
   - Primary coolant release to affected steam generator: 108,381 lbs (0 - 30 minutes).
   - Steam release from affected steam generator: 107,395 lbs from 0 - 30 minutes, or 2.15E+5 lb-mass/hr.
   - Steam release from intact steam generators: 0 - 2 hours = 38,924 lb-mass/hr per generator; 2 - 8 hours = 41,296 lb-mass/hr per generator.
   - Condenser is assumed unavailable and the following release points apply: faulted generator relief valves, intact steam line relief valves, AFWPT. If condenser is available, release points are as follows: steam line relief valves (3), AFWPT, Vent Vent 1, and Air Ejector. The Unit 1 Air Ejector vents through Vent Vent 1. The Unit 2 Air Ejector vents via an independent stack.
   - All activity released is distributed among the 3 main steam reliefs and AFWPT.
   - Concurrent Iodine spike is 4 hours in duration.
   - 10% of total activity is released via AFWPT. Steam flow to AFWPT: 40.5 lbs/hr per horsepower. Rated power = 710 horsepower. AFWPT total steam flow = 28,755 lbs/hr.

3. **FUEL HANDLING ACCIDENT (in Fuel Building):**
   - Release duration assumed for 1 hour.
   - Fuel Pool effective Iodine partition factor of 100.
   - Release is through the charcoal filtration system. The filters through which the fuel building is exhausted are assumed to be 95% efficient for all species of Iodine.
   - Fuel is not moved until 100 hours post shutdown (= decay time).

4. **WASTE GAS DECAY TANK RUPTURE:**
   - Release duration assumed for 15 minutes.
   - Entire contents of tank released at 100% Technical Specification limit (25,000 Ci D.E. Xe-133).
   - 1/2 of release occurs via Process Vent.
   - 1/2 of release occurs via Vent Vent.

5. **LOSS OF COOLANT ACCIDENT - MELT:**
   - Release duration: 2 hours.
   - Release paths: Containment (Containment leakage) and Vent Vent 2 (ECCS leakage).
   - Containment airborne source term: 100% core Noble Gases, 25% core Iodines.
   - Spray removal: 10 hr^{-1} for elemental Iodine.
   - Containment leak rate: 0.1% per day, 0 to 1 hour (1.3 cfm).
   - ECCS leakage: 0 gpm, 0 to 5 min.; 964 cc/hour 5 min. to 20 min.; 4800 cc/hr 20 min to 30 days.
   - Iodine released in building atmosphere from ECCS leakage: 10%.
   - Filter efficiency for safeguards exhaust: 90% elemental Iodine.

6. **LOSS OF COOLANT ACCIDENT - PC:**
   - RCS concentration assumed at Technical Specification limits.
   - Safeguards filter efficiency: 90% Elemental Iodine.
   - Release duration: 2 hours.

7. **LOSS OF COOLANT ACCIDENT - GAP:**
   - 3% core Noble Gases and 2% core Iodines assumed in gap.
   - Safeguards filter efficiency: 90% Elemental Iodine.
   - Release duration: 2 hours.

8. **LOCKED ROTOR:**
   - Fuel cladding failure is assumed at 5%.
   - Total release duration: 8 hours.
   - Iodine Partition Factor of 100 is assumed for the condenser.
   - Steam flow to AFWPT = 40.5 lbs/hr per horsepower. Rated power = 710 horsepower. AFWPT steam flow = 28,755 lbs/hr.
   - Release duration: 2 hours.

9. MISCELLANEOUS GENERAL ASSUMPTIONS:

- Vent Vent: Auxiliary Building, Air Ejector(s), Safeguards (filtered), Fuel Building (filtered), Containment Purge (filtered), Waste Gas Decay Tank area.
- Process Vent: Waste Gas Decay Tanks, Containment Vacuum.
- Containment leakage: MIDAS uses the higher of the two CHRRMS monitors to calculate the release.
- Air Ejector Monitors: MIDAS adds the Air Ejector release to the associated vent vent release.
- Main Steam and AFWPT: MIDAS adds the flows from each "open" and "status unknown" valve to calculate the total flow for a particular steam line. MIDAS sums the releases from all three steam lines and AFWPT to calculate the total release.
- For Vent Vents and Process Vents, MIDAS uses the highest radiation monitor indication on the affected pathway to calculate dose projections.
- For "Quick Dose" defaults: Unidentified mix, ground level, all release points active, and noble gas and iodine.
- SPS MIDAS FLOW RATES:

PATHWAY	FLOW RATES
VENT VENT STACK 2:	Flow as indicated by FT-VS-116 (for VG-110, VG-131) ERFCS unknown/bad data: 0 scfm MIDAS default: 1.72 E+5 scfm
PROCESS VENT:	Flow indicated by FT-GW-100 (for GW-130, GW-102) ERFCS unknown/bad data: 0 scfm MIDAS default flow: 300 scfm
AIR EJECTOR:	TV-SV-103 (-203) open: 25 scfm TV-SV-103 (-203) closed: 0 scfm TV-SV-103 (-203) ERFCS unknown/bad data: 25 scfm MIDAS default: 25 scfm
CONTAINMENT:	Containment pressure < 14.7 psia: 0 scfm Containment pressure > 14.7 psia: 1.3 scfm ERFCS unknown/bad data: 0 scfm MIDAS default: 1.30 scfm
MAIN STEAM:	The flow for all valves associated with a specific line are summed to determine the release rate associated with the radiation monitor for that pathway.
SAFETY VALVES:	Valve open or ERFCS unknown/bad data: 838,739 lb-mass/hr Valve closed: 0
ATMOSPHERIC RELIEFS:	Valve open or ERFCS unknown/bad data: 370,618 lb-mass/hr Valve closed: 0
MIDAS DEFAULT TOTAL:	3.73 E+6 lbs-mass/hr per steam line
AFWPT:	Flow indicated by FT-MS-100 (-200) ERFCS unknown/bad data: 0 MIDAS default: 3.7 E+5 lb-mass/hr

VIRGINIA POWER
SURRY POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.33	HEALTH PHYSICS NETWORK COMMUNICATIONS (With 1 Attachment)	4
		PAGE 1 of 7

PURPOSE

Provide guidance for Health Physics Network (HPN) Communicators to transmit data to the Nuclear Regulatory Commission (NRC), and to document the information transmitted.

ENTRY CONDITIONS

Any one of the following:

1. Activation by EPIP-4.03, DOSE ASSESSMENT TEAM CONTROLLING PROCEDURE.
2. Direction by the Radiological Assessment Coordinator.
3. NRC request to establish HPN communications.

Approvals on File

Effective Date 01/25/01

TRANSFER OF RESPONSIBILITIES TO SHIFT RELIEF CRITERIA

WHEN shift relief or turnover occurs, THEN do the following:

a) Tell relief about current emergency status.

b) Review information on Attachment 1 and Emergency Event Log.

c) Notify RAD/RAC of relief.

d) Give this procedure, its attachment(s) and Emergency Event Log to relief.

e) Have relief recorded on Emergency Event Log.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- HPN communications are initiated after the NRC announces over the Emergency Notification System (ENS, normally in the TSC or Control Room) that activation of HPN is warranted and the NRC is prepared to receive information.
- The TSC is responsible for performing HPN communications until the LEOF (or CEOF) is activated and the transfer of communications verified.
- The Radiological Assessment Director (RAD) is the HPN approval authority in the TSC, while the Radiological Assessment Coordinator (RAC) is the approval authority in the LEOF (CEOF).

_____ 1 INITIATE PROCEDURE:

- By: _____
  Date: _____
  Time: _____

_____ 2 VERIFY HPN COMMUNICATIONS BEING ESTABLISHED FOR THE FIRST TIME

IF initial HPN contact already established by another facility, THEN GO TO Step 9.

_____ 3 VERIFY NRC HAS REQUESTED HPN COMMUNICATIONS BE ESTABLISHED

Do NOT initiate HPN communications until NRC request is verified.

_____ 4 COMPLETE ATTACHMENT 1, HPN PROTECTIVE MEASURES STATUS:

- Refer to messages transmitted IAW EPIP-2.01, NOTIFICATION OF STATE AND LOCAL GOVERNMENTS
- Refer to latest approved dose assessment report, e.g., MIDAS
- Consult with emergency response organization staff (RAD/RAC, Dose Assessment Team Leader, etc.)

TRANSFER OF RESPONSIBILITIES TO SHIFT RELIEF CRITERIA

WHEN shift relief or turnover occurs, THEN do the following:

a) Tell relief about current emergency status.

b) Review information on Attachment 1 and Emergency Event Log.

c) Notify RAD/RAC of relief.

d) Give this procedure, its attachment(s) and Emergency Event Log to relief.

e) Have relief recorded on Emergency Event Log.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5	HAVE RAD/RAC REVIEW AND APPROVE COMPLETED ATTACHMENT 1 PRIOR TO TRANSMITTAL	
6	ESTABLISH HPN COMMUNICATIONS WITH NRC:	
	a) Check designated HPN phone for dial tone	a) IF designated HPN phone NOT operable, THEN do the following: 1) Get telephone number from tag attached to designated HPN phone. 2) Use any alternative telephone to establish contact with NRC. 3) GO TO Step 6.c.
	b) Establish contact with NRC using the telephone number listed on tag attached to designated HPN phone	
	c) Ask NRC Headquarters Operations Officer to transfer call to the HPN bridge	
	d) Record the following information on Emergency Event Log: • Name of NRC Protective Measures Team HPN Communicator • Date and time contact initiated	
7	READ ATTACHMENT 1, HPN PROTECTIVE MEASURES STATUS, TO NRC	
8	GO TO STEP 14	

TRANSFER OF RESPONSIBILITIES TO SHIFT RELIEF CRITERIA

WHEN shift relief or turnover occurs, THEN do the following:

a) Tell relief about current emergency status.

b) Review information on Attachment 1 and Emergency Event Log.

c) Notify RAD/RAC of relief.

d) Give this procedure, its attachment(s) and Emergency Event Log to relief.

e) Have relief recorded on Emergency Event Log.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

_____ 9 PREPARE TO TRANSFER HPN NOTIFICATION DUTY:

a) Get the following from current HPN Communicator:

- Completed Attachment 1, HPN Protective Measures Status
- Emergency Event Log

b) Ask RAC/RAD for briefing on current event status

NOTE: The HPN instruments in the TSC and LEOF are extensions of the same circuit. The HPN instrument in the CEOF is a separate circuit.

_____ 10 VERIFY FOLLOWING CONDITIONS EXIST:

- Current HPN Communicator using designated HPN phone in TSC or LEOF
- HPN notification duty being transferred to LEOF or TSC

IF either condition does NOT exist, THEN do the following:

a) IF designated HPN phone has dial tone, THEN establish contact with NRC using the telephone number listed on tag attached to the HPN phone.

IF designated HPN phone NOT operable, THEN do the following:

1) Get telephone number from tag attached to designated HPN phone.

2) Use any alternative telephone to establish contact with NRC.

b) Ask NRC Headquarters Operations Officer to transfer call to the HPN bridge.

c) GO TO Step 13.

TRANSFER OF RESPONSIBILITIES TO SHIFT RELIEF CRITERIA

WHEN shift relief or turnover occurs, THEN do the following:

a) Tell relief about current emergency status.

b) Review information on Attachment 1 and Emergency Event Log.

c) Notify RAD/RAC of relief.

d) Give this procedure, its attachment(s) and Emergency Event Log to relief.

e) Have relief recorded on Emergency Event Log.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 11	TAKE DESIGNATED HPN PHONE OFF-HOOK	
_____ 12	VERIFY CAPABILITY TO COMMUNICATE ON HPN BRIDGE	Do the following: a) Get telephone number from tag attached to designated HPN phone. b) Use any alternative telephone to establish contact with NRC. c) Ask NRC Headquarters Operations Officer to transfer call to the HPN bridge.
_____ 13	RELIEVE PREVIOUS HPN COMMUNICATOR OF NOTIFICATION DUTY: a) Notify NRC Protective Measures Team HPN Communicator of transfer b) Record transfer of HPN responsibility on Emergency Event Log (include name, location, date and time of transfer)	

TRANSFER OF RESPONSIBILITIES TO SHIFT RELIEF CRITERIA

WHEN shift relief or turnover occurs, THEN do the following:

a) Tell relief about current emergency status.

b) Review information on Attachment 1 and Emergency Event Log.

c) Notify RAD/RAC of relief.

d) Give this procedure, its attachment(s) and Emergency Event Log to relief.

e) Have relief recorded on Emergency Event Log.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE:
- Information contained in previously issued documents, e.g., plans and procedures, emergency messages, approved dose assessment reports (e.g., MIDAS), final versions of news releases, etc., may be transmitted to NRC without specific approval from the RAD/RAC.
- Licensee Protective Action Recommendations (PARs) are communicated in terms of concentric rings around the station out to a specified distance and affected sectors within a range of distances.
- State Protective Action Decisions (PADs) are communicated in terms of numbered protective action zones (PAZs), which are described in the Emergency Planning Information Calendar and the Commonwealth of Virginia Radiological Emergency Response Plan.

_____ 14 GET FOLLOW-UP INFORMATION REQUESTED BY NRC:

a) Prepare to answer questions related to the following:

- Changes to information on Attachment 1 (emergency class, PARs, release status, source term, meteorological data, dose projections)
- Trends
- Survey Data
- Contamination Levels
- Sample Results
- Personnel Exposure
- State PADs and status of their implementation

b) Get data from the following sources:

- Refer to messages transmitted IAW EPIP-2.01, NOTIFICATION OF STATE AND LOCAL GOVERNMENTS
- Latest approved dose assessment report, e.g., MIDAS
- Consultation with emergency response organization staff

TRANSFER OF RESPONSIBILITIES TO SHIFT RELIEF CRITERIA

WHEN shift relief or turnover occurs, THEN do the following:

a) Tell relief about current emergency status.

b) Review information on Attachment 1 and Emergency Event Log.

c) Notify RAD/RAC of relief.

d) Give this procedure, its attachment(s) and Emergency Event Log to relief.

e) Have relief recorded on Emergency Event Log.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
_____ 15	RECORD MESSAGES TRANSMITTED TO NRC ON EMERGENCY EVENT LOG	
_____ 16	CHECK IF HPN COMMUNICATIONS ARE TO BE TERMINATED: • NRC Protective Measures Team HPN Communicator terminates HPN communications and no follow-up calls are required OR • Event has terminated and RAD/RAC directs termination of communications (notify NRC Protective Measures Team HPN Communicator)	RETURN TO Step 14.
_____ 17	RECORD NAME/TITLE OF INDIVIDUAL AUTHORIZING TERMINATION OF HPN COMMUNICATIONS ON EMERGENCY EVENT LOG	
_____ 18	TERMINATE EPIP-4.33: • Give completed EPIP-4.33, forms and applicable records to the Radiological Assessment Director/Radiological Assessment Coordinator • By: _____ Date: _____ Time: _____	

-END-

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.33	HPN PROTECTIVE MEASURES STATUS	4
ATTACHMENT 1		PAGE 1 of 1

RAD/RAC Approval: _____

Plant: Surry Power Station; **Unit:** _____

Emergency Class:

[ ] NOUE - Declared at (Date/Time): _____/_____
[ ] Alert - Declared at (Date/Time): _____/_____
[ ] Site Area - Declared at (Date/Time): _____/_____
[ ] General - Declared at (Date/Time): _____/_____

Protective Action Recommendations (PARs):

[ ] None recommended at this time
[ ] Protective Actions recommended to State at (Date/Time): _____/_____
  [ ] Evacuate 360° from 0 to ___ miles.
  [ ] Evacuate downwind sectors from ___ to ___ miles.
  [ ] Shelter 360° from ___ to ___ miles.
  [ ] Shelter downwind sectors from ___ to ___ miles.
  [ ] Shelter unaffected sectors from ___ to ___ miles.

Release Status: _____

- Release duration: _____
- Start Date/Time: _____/_____; Stop Date/Time: _____/_____

Offsite Dose Rate Data:

- Date/Time data valid: _____/_____
- Source Term:
  Gas: _____; Iodine: _____
- Release is: [ ] Ground level; [ ] Elevated
- Meteorology:
  Wind Speed: _____; Wind Direction (from): _____; Stability Class: ____
- Dose Rates, based on: [ ] actual field measurements; [ ] projections, are as follows (specify units, e.g., Rem/hr or mRem/hr):

	Site Boundary	2 miles	5 miles	10 miles
DDE				
TEDE				
Thyroid CDE				

Other Information: (Plant status, onsite status, miscellaneous) _____

_____

_____