

EMERGENCY PLAN IMPLEMENTING PROCEDURES

<u>EPIP NO.</u>	<u>Procedure</u>	<u>Safety Code</u>	<u>Effective Date</u>
EPIP-1.01	Emergency Manager Controlling Procedure	S	05-24-83
EPIP-1.02	Response to Unusual Event	S	07-22-82
EPIP-1.03	Response to Alert	S	05-24-83
EPIP-1.04	Response to Site Emergency	S	05-24-83
EPIP-1.05	Response to General Emergency	S	05-24-83
EPIP-2.01	Notification of State and Local Governments	S	05-24-83
EPIP-2.02	Notification of NRC	S	07-22-82
EPIP-2.03	Reports of Offsite Agencies	S	09-01-82
EPIP-3.01	Callout of Emergency Response Personnel	S	05-24-83
EPIP-3.02	Activation of Technical Support Center	S	05-24-83
EPIP-3.03	Activation of Operational Support Center	S	05-24-83
EPIP-3.04	Activation of Emergency Operations Facility	S	05-24-83
EPIP-4.01	Radiological Assessment Director Controlling Procedure	S	05-24-83
EPIP-4.02	Radiation Protection Supervisor Controlling Procedure	S	05-24-83
EPIP-4.03	Dose Assessment Controlling Procedure	S	05-24-83
EPIP-4.04	Emergency Personnel Radiation Exposure	S	05-24-83
EPIP-4.05	Respiratory Protection	S	09-01-82

8306270186 830622
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<u>EPIP NO.</u>	<u>Procedure</u>	<u>Safety Code</u>	<u>Effective Date</u>
EPIP-4.06	Personnel Monitoring and Decontamination	S	05-24-83
EPIP-4.07	Protective Measures	S	05-24-83
EPIP-4.08	Initial Offsite Release Assessment	S	05-24-83
EPIP-4.09	Source Term Assessment	S	05-24-83
EPIP-4.10	Determination of X/Q	S	05-24-83
EPIP-4.11	Follow-Up Offsite Release Assessment	S	05-24-83
EPIP-4.12	Offsite Environmental Monitoring Instructions	S	05-24-83
EPIP-4.13	Offsite Release Assessment with Environmental Data	S	05-24-83
EPIP-4.14	Inplant Monitoring	S	09-01-82
EPIP-4.15	Onsite Monitoring	S	05-24-83
EPIP-4.16	Offsite Monitoring	S	05-24-83
EPIP-4.17	Monitoring of OSC and TSC	S	05-24-83
EPIP-4.18	Monitoring of EOF	S	05-24-83
EPIP-4.19	Use of Radios for Health Physics Monitoring	S	05-24-83
EPIP-4.20	Health Physics Actions for Transport of Contaminated Injured Personnel	S	05-24-83
EPIP-4.21	Evacuation and Remote Assembly Area Monitoring	S	09-01-82
EPIP-4.22	Post Accident Sampling of Containment Air	S	05-24-83

<u>EPIP NO.</u>	<u>Procedure</u>	<u>Safety Code</u>	<u>Effective Date</u>
EPIP-4.23	Post Accident Sampling of Reactor Coolant	S	05-24-83
EPIP-4.24	Gaseous Effluent Sampling During an Emergency	S	09-01-82
EPIP-4.25	Liquid Effluent Sampling During an Emergency	S	09-01-82
EPIP-4.26	High Level Activity Sample Analysis	S	09-01-82
EPIP-5.01	Transportation of Contaminated Injured Personnel	S	09-01-82
EPIP-5.02	Search and Rescue	S	07-22-82
EPIP-5.03	Personnel Accountability	S	05-24-83
EPIP-5.04	Access Control	S	07-22-82
EPIP-5.05	Site Evacuation	S	05-24-83
EPIP-5.06	Emergency Radiation Exposure Authorization	S	09-01-82
EPIP-5.07	Administration of Radioprotective Drugs	S	09-01-82
EPIP-5.08	Damage Control Guideline	S	07-22-82
EPIP-6.01	Re-entry/Recovery Guideline	S	07-22-82

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION

EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-1.01	EMERGENCY MANAGER CONTROLLING PROCEDURE (With 1 Attachment)	03
		PAGE 1 of 8

PURPOSE

To initially assess a potential emergency condition and initiate corrective actions.

USER

Shift Supervisor OR Station Emergency Manager

ENTRY CONDITIONS

Any one of the following :

1. Another station procedure directs initiation of this procedure,

OR

2. A potential emergency condition is reported to the Shift Supervisor.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): ENTIRE PROCEDURE	DATE: 07-02-82
REV. 01	PAGE(S): ENTIRE PROCEDURE	DATE: 07-22-82
REV. 02	PAGE(S): ENTIRE PROCEDURE	DATE: 03-09-83
REV. 03	PAGE(S): ENTIRE PROCEDURE	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

B.J. Pappas

APPROVED

[Signature]
CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

DATE

05-24-83

<i>NUMBER</i>	<i>PROCEDURE TITLE</i>	<i>REVISION</i>
EPIP-1.01	EMERGENCY MANAGER CONTROLLING PROCEDURE	03
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	<p>INITIATE PROCEDURE:</p> <p>a) BY: _____</p> <p>DATE: _____</p> <p>TIME: _____</p> <p><u>NOTE:</u> Continue through this and all further instructions unless otherwise directed to hold.</p>	
2.	<p>IDENTIFY EVENT:</p> <p>a) Event-TRANSPORT OF CONTAMINATED INJURED PERSONNEL</p> <p>1) Initiate EPIP-5.01 <u>Transport of Contaminated Injured Personnel</u></p> <p>2) Verify initiation of <u>EPIP-4.20, H.P. Actions for Transport of Injured Contaminated Personnel</u></p> <p>3) Continue this instruction</p> <p>b) Event-RADIATION RELEASE</p> <p>1) Request Health Physics initiate EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u>, and continue this instruction</p>	<p>a) <u>GO TO</u> Step <u>2.b</u> of this instruction.</p> <p>b) <u>GO TO</u> Step <u>2.c</u> of this instruction.</p>

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EPIP-1.01	EMERGENCY MANAGER CONTROLLING PROCEDURE	PAGE 3 of 8

STEP

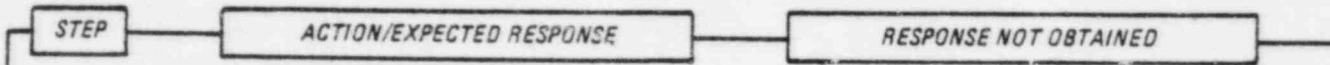
ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

2. (CONTINUED)

- | | |
|--|---|
| <p>c) Event-FUEL HANDLING INCIDENT</p> <p>1) Request Health Physics initiate EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u>, and continue this instruction</p> | <p>c) <u>GO TO</u> Step <u>2.d</u> of this instruction.</p> |
| <p>d) Event-SECONDARY RELEASE</p> <p>1) Request Health Physics initiate EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u>, and continue this instruction</p> | <p>d) <u>GO TO</u> Step <u>2.e</u> of this instruction.</p> |
| <p>e) Event-S/G TUBE RUPTURE</p> <p>1) Request Health Physics initiate EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u>, and continue this instruction</p> | <p>e) <u>GO TO</u> Step <u>2.f</u> of this instruction.</p> |
| <p>f) Event-LOCA</p> <p>1) Request Health Physics initiate EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u>, and continue this instruction.</p> | <p>f) <u>GO TO</u> Step <u>3</u> of this instruction.</p> |

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

3. ASSESSMENT AND CLASSIFICATION:

a) Refer to Index EPIP 1.01, of Attachment 1, Emergency Action Levels

AND

1) Using index, determine event category AND GO TO proper EAL tab

AND

2) Evaluate event, determine classification, AND Go To Step 4 of this procedure

4. VERIFY CLASSIFICATION:

a) EOF- NOT ACTIVATED

a) If EOF activated, announce to staff the transfer of command from TSC to EOF and proceed to 4.b.

b) TSC - NOT ACTIVATED

b) IF TSC activated, GO TO Step 6.

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

c) Notify SRO-On-Call or Superintendent of Operations

c) Notify Station Manager or Asst. Station Manager.

d) Verify classification

e) If required by Alert, Site, or General Emergency request initiation of ADMIN 19.6, Conduct of Operations Notification

NOTE: Return to Step 2 of this instruction as necessary during the course of the situation for additional events and reclassification.

5. VERIFY EALS EXCEEDED:

a) EALS-EXCEEDED

a) IF EALS NOT exceeded, DO NOT declare an emergency classification.

AND

1) Continue appropriate corrective action IAW procedures.

2) GO TO Step 7 of this procedure.

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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5. (CONTINUED)

- b) Assign appropriate individual as interim Emergency Communicator
- c) Direct senior H.P. personnel on site to initiate EPIP-4.01, Radiological Assessment Director Controlling Procedure

6. DETERMINE EPIPS:

- a) Event classification - UNUSUAL EVENT
 - 1) GO TO EPIP-1.02, Response to Unusual Event
 - b) Event classification - ALERT
 - 1) GO TO EPIP-1.03, Response to Alert
 - c) Event classification - SITE EMERGENCY
 - 1) GO TO EPIP-1.04, Response to Site Emergency
 - d) Event classification - GENERAL EMERGENCY
 - 1) GO TO EPIP-1.05, Response to General Emergency
- a) GO TO Step 6.b of this instruction.
- b) GO TO Step 6.c of this instruction.
- c) GO TO Step 6.d of this instruction.

<p>NUMBER</p> <p>EPIP-1.01</p>	<p>PROCEDURE TITLE</p> <p>EMERGENCY MANAGER CONTROLLING PROCEDURE</p>	<p>REVISION</p> <p>03</p>
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

7. SECURE FROM EVENT:
- a) Notify involved station personnel that emergency condition does not exist
 - b) GO TO Step 11 of this instruction
8. TERMINATE EMERGENCY:
- a) Notify involved station personnel that emergency condition is no longer in effect
 - b) Initiate recovery actions IAW established station procedure and capabilities
 - c) Notify OSC Director to deactivate the OSC
 - b) IF required actions are beyond the scope of established procedures and capabilities, THEN GO TO Step 9 of this instruction.
9. TERMINATION NOTIFICATIONS:
- a) Initiate termination notification to counties and state IAW EPIP-2.01, Notification of State and Local Governments
 - b) Initiate termination notification to NRC IAW EPIP-2.02, Notification of NRC

NUMBER	PROCEDURE TITLE	REVISION 03
EPIP-1.01	EMERGENCY MANAGER CONTROLLING PROCEDURE	PAGE 8 of 8

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
9.	(CONTINUED) c) <u>IF</u> required recovery actions where considered beyond the scope of normal procedures and capabilities in Step 8, <u>GO TO EPIP-6.01, Recovery and Restortation Guideline</u>	
10.	REPORTING: a) Verify required reports and notifications IAW EPIP-2.03, <u>Reports to Offsite Agencies</u>	
11.	ADMINISTRATION: a) Initiate replacement of any used procedures and forms b) Forward completed EFIPs, forms and other applicable records to SNSOC for review c) <u>IF</u> required, deactivate TSC	
12.	TERMINATE EPIP-1.01: a) COMPLETED BY: _____ DATE: _____ TIME: _____	
		END

<i>NUMBER</i> EPIP-1.01	<i>ATTACHMENT TITLE</i> EMERGENCY ACTION LEVEL TABLE	<i>REVISION</i> 03
<i>ATTACHMENT</i> 1	INDEX	<i>PAGE</i> 1 of 38

CAUTION: Declaration of the highest emergency class for which an EAL is exceeded shall be made.

<u>IF EVENT CATEGORY IS:</u>	<u>GO TO</u> <u>TAB</u>
1. Safety, Shutdown, or Assessment System Event	A
2. Reactor Coolant System Event	B
3. Fuel Failure or Fuel Handling Accident.....	C
4. Containment Event.....	D
5. Radioactivity Event.....	E
6. Contaminated Personnel	F
7. Loss of Secondary Cooling.....	G
8. Electrical Failure.....	H
9. Fire.....	I
10. Security Event.....	J
11. Hazard to Station Operation.....	K
12. Natural Events.....	L
13. Miscellaneous Abnormal Events.....	M

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB A)	REVISION 03
ATTACHMENT 1	SYSTEM SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	PAGE 2 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Non-transient ECCS initiation MODES 1, 2, 3 & 4	Non-spurious ECCS initiation as validated by Emergency Procedures	Unusual Event
2. Non compliance with Tech. Spec. Limiting Condition for Operation MODES 1 & 2	Unit(s) placed in Mode 3 or lower status as a result of Loss of Engineered Safety Feature, Fire Protection System or other noncompliance with T.S. Limiting Conditions for Operation	Unusual Event
3. Failure of a safety or relief valve to close after pressure reduction, which may affect the health and safety of the public ALL MODES	Either condition a) or b) exists: a) <u>RCS</u> Pressurizer safety or PORV flow as indicated by accoustical or temperature monitoring equipment <u>AND</u> RCS pressure-LESS THAN <u>1600 psig</u> b) <u>Main Steam</u> Excessive Steam Generator Safety, PORV, or Decay Heat Release flow as indicated by rapid RCS cooldown rate <u>AND</u> MS pressure is GREATER THAN <u>100 psi</u> below set point of affected valve.	Unusual Event

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB A)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>SYSTEM SHUTDOWN, OR ASSESSMENT SYSTEM EVENT</p>	<p>PAGE 3 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>4. Loss of function needed for unit CSD condition</p> <p>MODE 5</p>	<p>a) Total loss of Secondary System cooling capability</p> <p>b) Total loss of any of the following systems:</p> <p>1) Service Water</p> <p><u>OR</u></p> <p>2) Component Cooling</p> <p><u>OR</u></p> <p>3) Residual Heat Removal</p>	<p>Alert</p>
<p>5. Loss of Function needed for unit HSD condition</p> <p>MODES 1,2,3 & 4</p>	<p>Total loss of the following:</p> <p>a) Charging/SI System</p> <p><u>OR</u></p> <p>b) Main feedwater <u>AND</u> Auxiliary Feedwater Systems</p>	<p>Site Emergency</p>
<p>6. Failure of the Reactor Protection System to complete a trip which takes the Rx Subcritical</p> <p>MODES 1 & 2</p>	<p>a) Manual or Automatic RX trip-INITIATED</p> <p><u>AND</u></p> <p>b) Intermediate Range Monitor indicating-ZERO or POSITIVE SUR</p>	<p>Alert</p>

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB A)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>SYSTEM SHUTDOWN, OR ASSESSMENT SYSTEM EVENT</p>	<p>PAGE 4 of 38</p>

<u>CONDITION</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>7. Failure of the Reactor Protection System to initiate and complete a required trip while at power MODES 1 & 2</p>	<p>Condition a) and b), exists with c) a) RX trip setpoint and coincidences-EXC EDED <u>AND</u> b) Manual Rx trip-INITIATED <u>AND</u> c) Rx power indication NOT DECREASING</p>	<p>Site Emergency</p>
<p>8. Indications or alarms on process or effluent parameters required for incident assessment <u>NOT</u> functional in the control room MODES 1,2,3 & 4</p>	<p>Unit(s) placed in Mode 3 or lower condition as a result of any of the following: a) Containment Gaseous or Particulate Radiation Monitors- <u>NOT</u> OPERABLE <u>AND</u> Backup grab sample capability is inoperable per leak detection T.S.3.4.6.1 <u>OR</u> b) Meteorological monitoring instrumentation- <u>LESS THAN</u> minimum required to perform offsite dose calculations per Unit 1 T.S.3.3.3.4 <u>OR</u> c) Post-accident instrumentation-<u>LESS THAN</u> minimum channels allowable per T.S. 3.3.3.6</p>	<p>Unusual Event</p>

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB A)	REVISION 03
ATTACHMENT 1	SYSTEM SHUTDOWN, OR ASSESSMENT SYSTEM EVENT	PAGE 5 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
9. Loss of communications capability	Complete failure of the following:	Unusual Event
ALL MODES	a) Station PBX phone system	
	<u>AND</u>	
	b) Station Gai-Tronics system	
	<u>AND</u>	
	c) Station UHF radio system	
10. All main board annunciator alarms and unit computer lost	Simultaneous loss of all annunciator alarms on panels "A" to "K" with loss of unit computer	Alert
MODES 1 & 2		
11. All main board annunciator alarms and unit computer lost for more than 15 minutes during a unit transient	Complete loss of all annunciator alarms on panels "A" to "K" with loss of unit computer for GREATER THAN <u>15</u> minutes	Site Emergency
MODES 1 & 2	<u>AND</u>	
	Unit operational transient- IN PROGRESS	
12. Evacuation of Main Control Room required	Evacuation of the Control Room with shut down control established within <u>15</u> minutes	Alert
ALL MODES		
13. Evacuation of Main Control Room with control <u>NOT</u> established within <u>15</u> minutes	Evacuation of the Control Room with local shutdown control <u>NOT</u> established within <u>15</u> minutes	Site Emergency
ALL MODES		

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB B)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>REACTOR COOLANT SYSTEM EVENT</p>	<p>PAGE 6 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>1. Safety Limit-RCS Temperature/Pressure curve exceeds</p>	<p>Limits of T.S. Fig 2.1.1 - EXCEEDED</p>	<p>Unusual Event</p>
<p>MODES 1 & 2</p>		
<p>2. RCS overpressure</p>	<p>2735 psig RCS pressure limit- EXCEEDED</p>	<p>Unusual Event</p>
<p>MODES 1,2,3,4 & 5</p>		
<p>3. RCP locked rotor leading to fuel dam- age</p>	<p>All the following exists:</p>	<p>Alert</p>
<p>MODE 1</p>	<p>a) Flow in one or more RC loops LESS THAN <u>90%</u></p>	
	<p><u>AND</u></p>	
	<p>b) RCP trip caused by Phase Overcurrent Relay actuation</p>	
	<p><u>AND</u></p>	
	<p>c) High Range Letdown Radiation Monitor indication increases to-GREATER THAN <u>10⁶</u> cpm</p>	

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB B)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>REACTOR COOLANT SYSTEM EVENT</p>	<p>PAGE 7 of 38</p>

<u>CONDITION/Applicability</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>4. RCS leak rate requiring plant shutdown IAW. T.S. 3.4.6.2</p>	<p>Unit in Mode 3 or lower as a result of any of the following:</p>	<p>Unusual Event</p>
<p>MODES 1 & 2</p>	<p>a) Unidentified RCS leakage- GREATER THAN <u>1 gpm</u></p>	
	<p><u>OR</u></p>	
	<p>b) Identified leakage-GREATER THAN <u>10 gpm</u></p>	
	<p><u>OR</u></p>	
	<p>c) Controlled leakage from RCP seals-GREATER THAN <u>30 gpm</u> TOTAL</p>	
	<p><u>OR</u></p>	
	<p>d) Any pressure boundry leakage</p>	
<p>5. RCS leak rate exceeds 50 gpm</p>	<p>Pressurizer Level cannot be maintained GREATER THAN <u>22%</u> with one(1) Charging/SI Pump in operation</p>	<p>Alert</p>
<p>MODES 1, 2, 3 & 4</p>	<p><u>AND</u></p>	
	<p>RCS inventory balance indi- cates leakage-GREATER THAN <u>50 gpm</u></p>	
<p>6. RCS leak rate exceeds 300 gpm</p>	<p>EP-2, <u>Loss of Reactor Cool- ant, in effect</u></p>	<p>Site Emergency</p>
<p>MODES 1, 2, 3 & 4</p>	<p><u>AND</u></p>	
	<p>Pressurizer level can not be maintained with two (2) or more Charging/SI Pumps in operation</p>	

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB B)	REVISION 03
ATTACHMENT 1	REACTOR COOLANT SYSTEM EVENT	PAGE 8 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
7. Primary to Secondary leakage-GREATER THAN 1 gpm MODES 1, 2, 3 & 4	Unit in Mode 3 or lower condition as a result of actions required by T.S. 3.4.6.2	Unusual Event
8. Gross Primary to Secondary leakage MODES 1, 2, 3 & 4	EP-4, <u>Steam Generator Tube Rupture</u> , is in effect with SI in progress <u>AND</u> Condenser Air Ejector <u>OR</u> Steam Generator Blowdown Monitor GREATER THAN 1×10^6 cpm	Alert
9. Excessive Primary to Secondary leakage with loss of offsite power MODES 1, 2 & 3	Unit in Mode 3 or lower condition as a result of actions required by T.S. 3.4.6.2 <u>AND</u> Condenser Air Ejector <u>OR</u> Steam Generator Blowdown Monitor Readings-GREATER THAN 1×10^6 cpm <u>AND</u> Loss of offsite power indicated by zero volts on voltmeters for 4160V buses D, E & F.	Alert
10. Gross Primary to Secondary leakage with loss of offsite power MODES 1, 2, 3 & 4	EP-4, <u>Steam Generator Tube Rupture</u> , is in effect with SI in progress <u>AND</u>	Site Emergency

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB B)	REVISION 03
ATTACHMENT 1	REACTOR COOLANT SYSTEM EVENT	PAGE 9 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
10. (CONTINUED)	Condenser Air Ejector <u>OR</u> Steam Generator Blowdown Monitor <u>GREATER</u> THAN <u>1x10⁶</u> cpm	
	<u>AND</u>	
	Loss of offsite power indicated by zero volts on voltmeters for 4160V Buses D, E & F	
11. Loss of 2 of 3 fission product barriers with potential loss of 3rd barrier	Any two of a), b) or c) exist and the third is imminent	General Emergency
ALL MODES	a) Fuel clad integrity failure as indicated by any of the following:	
	1) RCS specific activity - <u>GREATER THAN OR EQUAL TO 300.0</u> uCi/Gram dose equivalent I-131.	
	2) 5 or more core exit thermocouples <u>GREATER THAN 1200°</u> F	
	<u>OR</u>	
	b) Loss of RCS integrity as indicated by any of the following:	
	1) RCS pressure- <u>GREATER THAN 2735</u> psig	

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB B)</p>	<p>REVISION 03</p>
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<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>11. (CONTINUED)</p>	<p>2) EP-2, <u>LOCA</u>, has been implemented</p> <p>3) Containment High Range Area Radiation Monitor -GREATER THAN <u>10⁴</u> mR/Hr</p> <p style="text-align: center;"><u>OR</u></p> <p>c) Loss of containment integrity as indicated by any of the following:</p> <p>1) Containment pressure -GREATER THAN <u>60</u> psia and <u>NOT</u> decreasing</p> <p>2) Loss of containment integrity as defined in T.S. 1.8</p>	
<p>12. Fuel failure with steam generator tube rupture</p> <p>ALL MODES</p>	<p>Any two of a),b) or c) exists and the third is imminent</p> <p>a) Fuel clad integrity failure as indicated by any of the following:</p> <p>1) RCS specific activity- GREATER THAN <u>300</u> uCi/gram dose equivalent I-131</p> <p>2) 5 or more core exit thermocouples -GREATER THAN <u>1200°</u> F</p> <p style="text-align: center;"><u>OR</u></p>	<p>General Emergency</p>

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB B)	REVISION 03
ATTACHMENT 1	REACTOR COOLANT SYSTEM EVENT	PAGE 11 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
12. (CONTINUED)	b) S/G tube rupture as indicated by both of the following: <ol style="list-style-type: none"> 1) SI initiated by RCS Low Pressure 2) EP-4, <u>Steam Generator Tube Rupture</u>, initiated 	
	<u>OR</u>	
	c) Loss of Secondary integrity as indicated by any of the following: <ol style="list-style-type: none"> 1) Main Steam PORV - OPEN 2) Main Steam RV - OPEN 3) EP-3, <u>Loss of Secondary Coolant</u>, initiated 	

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB C)	REVISION 03
ATTACHMENT 1	FUEL FAILURE OR FUEL HANDLING ACCIDENT	PAGE 12 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Fuel clad damage indication MODES 1,2,3 & 4	Unit shutdown required IAW action statement (b) of T.S. 3.4.8.b	Unusual Event
	<u>OR</u>	
	High Range Letdown Radiation Monitor indication increases GREATER THAN <u>10⁵ cpm</u> within <u>30 minutes AND remains for at least 15 minutes</u>	
2. Severe Fuel Clad Damage MODES 1,2,3 & 4	RCS specific activity- GREATER THAN <u>300.0</u> uCi/gram dose equivalent I-131	Alert
	<u>OR</u>	
	High Range Letdown Radiation Monitor indication increases GREATER THAN <u>10⁶ cpm</u> within <u>30 minutes AND remains for at least 15 minutes</u>	
3. Core damage with possible loss of coolable geometry MODES 1,2,3 & 4	Condition a) exists with b) a) Fuel clad failure as indicated by any of the following: 1) RCS Specific activity GREATER THAN <u>60</u> uCi/gram dose equivalent I-131	Site Emergency

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB C) FUEL FAILURE OR FUEL HANDLING ACCIDENT	REVISION 03
ATTACHMENT 1		PAGE 13 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3. (CONTINUED)	2) High Range Letdown Radiation Monitor indication - GREATER THAN <u>1x10⁵</u> cpm	
	<u>AND</u>	
	b) Loss of cooling as in- dicated by any of the following:	
	1) 5 confirmed core exit thermocouples - GREATER THAN <u>1200° F</u>	
	2) Core DT-ZERO	
	3) Core DT - RAPIDLY DIVERGING	

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB C)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>FUEL FAILURE OR FUEL HANDLING ACCIDENT</p>	<p>PAGE 14 of 38</p>

<u>CONDITION?APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>4. Probable large radio-activity release initiated by LOCA with ECCS failure leading to core degradation</p>	<p>EP-2, <u>LOCA</u>, has been implemented <u>AND</u> RCS specific activity <u>-GREATER THAN 3000.0 uCi/gram</u> dose equivalent I-131</p>	<p>General Emergency</p>
<p>ALL MODES</p>	<p><u>AND</u> High or Low Head ECCS flow are <u>NOT</u> being delivered to the core</p>	
<p>5. Probable large radio-activity release initiated by loss of heat sink leading to core degradation</p>	<p>Loss of Main FW system and Condensate System <u>AND</u> Loss of Auxiliary FW System</p>	<p>General Emergency</p>
<p>6. Probable large radio-activity release initiated by failure of protection system to bring Rx subcritical and causing core degradation</p>	<p>Condition a) exists with b) or c) a) Rx nuclear power after a trip <u>-GREATER THAN 5%</u> b) RCS pressure <u>GREATER THAN OR EQUAL TO 2485 psig</u> c) Containment pressure <u>AND</u> temperature <u>-RAPIDLY INCREASING</u></p>	<p>General Emergency</p>
<p>ALL MODES</p>		

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB C)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>FUEL FAILURE OR FUEL HANDLING ACCIDENT</p>	<p>PAGE 15 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>7. Probable large radio-activity release initiated by loss of AC and all feedwater</p>	<p>a) Loss of all AC procedures implemented</p>	<p>General Emergency</p>
<p>ALL MODES</p>	<p><u>AND</u></p>	
	<p>b) Turbine Driven Auxiliary Feedwater Pump <u>NOT</u> OPERABLE</p>	
	<p><u>AND</u></p>	
	<p>c) Restoration of a) or b) above not likely within 2 hours</p>	
<p>8. Probable large radio-activity release initiated by LOCA with loss of ECCS and containment cooling</p>	<p>Condition a) and b) exist with c) or d)</p>	<p>General Emergency</p>
<p>ALL MODES</p>	<p>a) EP-2 <u>LOCA</u>, initiated</p>	
	<p><u>AND</u></p>	
	<p>b) High or Low Head ECCS flow is <u>NOT</u> being delivered to the core</p>	
	<p><u>AND</u></p>	
	<p>c) Containment RS sump temperature-GREATER THAN <u>190°</u> F <u>AND NOT</u> DECREASING</p>	
	<p><u>OR</u></p>	
	<p>d) Quench Spray and Recirculation Spray Systems- <u>NOT</u> OPERABLE</p>	

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB C) FUEL FAILURE OR FUEL HANDLING ACCIDENT	REVISION 03
ATTACHMENT 1		PAGE 16 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
9. Fuel damage accident with release of radio-activity to containment or fuel buildings ALL MODES	Condition a) exists with b) or c) a) Verified accident involving damage to irradiated fuel <u>AND</u> b) Health Physics confirms fission product release from fuel <u>OR</u> c) Readings on the Ventilation Vent Gaseous Monitor -GREATER THAN 1×10^4 cpm	Alert
10. Major fuel damage accident with radio-activity release to containment or fuel buildings ALL MODES	Conditions a) or b) exist with c) a) Water level in Rx vessel during refueling -BELOW TOP OF CORE <u>OR</u> b) Water level in Spent Fuel Pit -BELOW TOP OF SPENT FUEL <u>AND</u> c) Verified damage to irradiated fuel resulting in readings on Ventilation Vent Gaseous Monitor -GREATER THAN 1×10^3 cpm	Site Emergency

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB D) CONTAINMENT EVENT	REVISION 03
ATTACHMENT 1		PAGE 17 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Loss of Containment integrity MODES 1,2,3 & 4	Unit has been placed in Mode 3 or lower condition due to a loss of containment integrity as defined by T.S.1.2. and prescribed by T.S. 1.6.1.1	Unusual Event
2. High-high Containment radiation, pressure and temperature MODES 1,2,3 & 4	Condition a) exists with b) or c) a) Containment High Range Radiation Monitor GREATER THAN <u>10°</u> mR/hr <u>AND</u> b) Containment pressure -GREATER THAN <u>17</u> psia <u>OR</u> c) Containment temperature -GREATER THAN <u>150°</u> F	Alert
3. High-high Containment radiation, pressure, and temperature MODES 1,2,3 & 4	Condition a) exists with b) or c) a) Containment High Range Radiation Monitor indicates-GREATER THAN <u>10²</u> mR/hr <u>AND</u> b) Containment pressure -GREATER THAN <u>27.75</u> psia AND is <u>NOT</u> decreasing <u>OR</u> c) Containment temperature indicates-GREATER THAN <u>200°</u> F	Site Emergency

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB D) CONTAINMENT EVENT	REVISION 03
ATTACHMENT 1		PAGE 18 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
4. Extremely high Con- tainment radiation, pressure and temp- perature	Condition a)exists with b) or c)	General Emergency
MODES 1,2,3 & 4	a) Containment High Range Radiation Monitor - GREATER THAN <u>10⁴</u> mR/Hr	
	<u>AND</u>	
	b) Containment pressure -GREATER THAN <u>45</u> psia <u>AND NOT DECREASING</u>	
	<u>OR</u>	
	c) Containment temperature -GREATER THAN <u>280°</u> F	

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB E) RADIOACTIVITY EVENT	REVISION 03
ATTACHMENT 1		PAGE 19 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Effluent release GREATER THAN T.S. allowable Limit ALL MODES	Any of the following monitors indicate valid readings above the spec- ified value a) Clarifer Effluent Monitor-GREATER THAN <u>2.4×10^5</u> cpm b) Vent Stack A Gaseous Monitor-GREATER THAN <u>3.4×10^4</u> cpm c) Vent Stack A Parti- culate Monitor-GREATER THAN <u>4.5×10^4</u> cpm d) Vent Stack B Gaseous Monitor-GREATER THAN 1×10^6 cpm FOR LESS THAN <u>15 MINUTES</u> e) Vent Stack B Particulate Monitor-GREATER THAN <u>3.8×10^4</u> cpm f) Air Ejector Monitor(s)- GREATER THAN <u>6.8×10^4</u> cpm g) Discharge Canal Monitor- GREATER THAN <u>6.0×10^2</u> cpm h) Process Vent Gaseous Monitor-GREATER THAN <u>1×10^6</u> cpm FOR LESS THAN <u>15 MINUTES</u> i) Process Vent Particulate Monitor-GREATER THAN <u>1×10^6</u> cpm FOR LESS THAN <u>15 MINUTES</u>	Unusual Event

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB E) RADIOACTIVITY EVENT	REVISION 03
ATTACHMENT 1		PAGE 20 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
2. Effluent Release GREATER THAN 10 TIMES T.S. instan- taneous allow- able limits ALL MODES	Any of the following monitors indicate valid readings above the specified values a) Clarifier Effluent Monitor-GREATER THAN 1×10^6 cpm b) Vent Stack A Gaseous Monitor-GREATER THAN 3.4×10^5 cpm c) Vent Stack A Partic- ulate Monitor-GREATER THAN 4.5×10^3 cpm d) Vent Stack B Gaseous Monitor-GREATER THAN 1×10^6 cpm FOR GREATER THAN 15 MINUTES e) Vent Stack B Partic- ulate Monitor-GREATER THAN 3.8×10^3 cpm f) Air Ejector Monitor(s)- GREATER THAN 6.8×10^3 cpm g) Discharge Canal Monitor- GREATER THAN 6.0×10^3 cpm h) Process Vent Gaseous Monitor-GREATER THAN 1×10^6 cpm FOR GREATER THAN 15 MINUTES i) Process Vent Particulate Monitor-GREATER THAN 1×10^6 cpm FOR GREATER THAN 15 MINUTES	Alert

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB E)	REVISION 03
ATTACHMENT 1	RADIOACTIVITY EVENT	PAGE 21 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3 Projected or actual site boundary doses of 0.5 Rem to 2 Rem W.B. or 1 Rem to 12 Rem thyroid exposure	Valid indications of any of the following exist: a) Any Main Steam Line High Range Monitor ALL MODES GREATER THAN <u>1.6</u> mR/hr <u>OR</u> b) Ventilation Vent A High Range Monitor GREATER THAN <u>6.5×10^{-2}</u> mR/hr in coincidence with Ventilation Vent Gaseous Monitor off scale high <u>OR</u> c) Ventilation Vent B High Range Monitor GREATER THAN <u>3×10^{-2}</u> mR/hr in coincidence with Ventilation Vent Gaseous Monitor off scale high <u>OR</u> d) Process Vent High Range Monitor -GREATER THAN <u>64</u> mR/hr <u>OR</u> e) Monitoring Team samples indicate doses of from <u>0.5 to 2.0</u> Rem W.B. or <u>1 to 12</u> Rem thyroid exposure at the site boundary	Site Emergency

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB E) RADIOACTIVITY EVENT	REVISION 03
ATTACHMENT 1		PAGE 22 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
4. Projected or actual site boundary doses exceed 2 Rem W.B. or 12 Rem thyroid exposure ALL MODES	a) Confirmed Health Physics assessments of site boundary actual or projected doses -GREATER THAN <u>2</u> Rem WHOLE BODY OR 12 Rem THYROID EXPOSURE	General Emergency
	<u>OR</u>	
	b) Valid indications of the following exist:	
	1) Any Main Steam Line High Range Monitor -GREATER THAN <u>6.4</u> mR/hr	
	<u>OR</u>	
	2) Ventilation Vent A High Range Monitor -GREATER THAN <u>2.6×10^{-1}</u> mR/hr	
	<u>OR</u>	
	3) Ventilation Vent B High Range Monitor -GREATER THAN <u>3.2×10^{-1}</u> mR/hr	
	<u>OR</u>	
	4) Process Vent High Range Monitor GREATER THAN <u>256</u> mR/hr	

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB E) RADIOACTIVITY EVENT	REVISION 03
ATTACHMENT 1		PAGE 23 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
5. High radiation or airborne contamination levels indicate a severe degradation in control of radioactive material	Valid unexpected levels on any of the following monitors have increased by a factor of 1000	Alert
ALL MODES	a) Ventilation Vent Multi-sample Gaseous and Particulate Monitor b) Control Room Area Monitor c) Auxiliary Building Control Area Monitor d) Auxiliary Building Drumming Area Monitor e) Decontamination Building Area Monitor f) Fuel Pit Bridge Area Monitor g) New Fuel Storage Area Monitor h) Laboratory Area Monitor i) Sample Room Area Monitor	

<i>NUMBER</i> EPIP-1.01	<i>ATTACHMENT TITLE</i> EMERGENCY ACTION LEVEL TABLE (TAB F) CONTAMINATED PERSONNEL	<i>REVISION</i> 03
<i>ATTACHMENT</i> 1		<i>PAGE</i> 24 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Transportation of contaminated injured individual to off-site facility ALL MODES	Contaminated injured individual enroute to off-site facility for treatment	Unusual Event

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB G)	REVISION 03
ATTACHMENT 1	LOSS OF SECONDARY COOLANT	PAGE 25 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Major Secondary line break MODES 1,2,3 & 4	EP-3, <u>Loss of Secondary Coolant</u> , initiated and verified non-spurious	Unusual Event
2. Major Secondary line break with significant Primary to Secondary leakage MODES 1,2,3 & 4	Condition a) exists with b),c) or d) a) EP-3, <u>Loss of Secondary Coolant</u> , initiated and verified non-spurious	Alert
<u>AND</u>		
b) Condenser Air Ejector Radiation Monitor -GREATER THAN <u>7×10^5</u> cpm		
<u>OR</u>		
c) Steam Generator Blow-down Radiation Monitor -GREATER THAN <u>10^3</u> cpm		
<u>OR</u>		
d) MS Line High Range Radiation Monitor -GREATER THAN <u>0.5</u> mR/hr		

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB G) LOSS OF SECONDARY COOLANT	REVISION 03
ATTACHMENT 1		PAGE 26 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3. Major Secondary line break with significant Primary to Secondary leakage and fuel damage indicated MODES 1,2,3 & 4	Conditions a) and b) exist with c), d) or e) a) EP-3, <u>Loss of Secondary Coolant</u> , initiated and verified non-spurious <u>AND</u> b) RCS specific activity exceeds limits of T.S. Figure 3.4.1 OR Let-down High Range Radiation Monitor -GREATER THAN <u>10⁵</u> cpm c) Condenser Air Ejector Radiation Monitor -GREATER THAN <u>10⁶</u> cpm <u>OR</u> d) Steam Generator Blow-down Radiation Monitor -GREATER THAN <u>10⁶</u> cpm <u>OR</u> e) MS Line High Range Radiation Monitor -GREATER THAN <u>1.6</u> mR/hr	Site Emergency

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB H) ELECTRICAL FAILURE	REVISION 03
ATTACHMENT 1		PAGE 27 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Loss of off-site power or on-site AC power capability ALL MODES	Unit Main Generator and both Emergency Diesel Generators out of service	Unusual Event
	<u>OR</u>	
	Loss of all 34.5KV Reserve Station Service Buses	
2. Loss of all off-site and on-site AC power ALL MODES	Ammeters for 4160V Reserve Station Service Buses D, E, & F all indicate-ZERO (0) AMPS	Alert
	<u>AND</u>	
	Ammeters for 4160V Station Service Buses A,B,& C all indicate-ZERO (0) AMPS	
	<u>AND</u>	
	Ammeters for 4160V Emergency Buses H and J both indicate-ZERO (0) AMPS	
3. Loss of off-site and on-site AC power for more than 15 minutes ALL MODES	The following conditions exist for a period of- <u>GREATER THAN 15 minutes</u>	Site Emergency
	a) Ammeters for 4160V Reserve Station Service Buses D,E,& F all indicate-ZERO (0) AMPS	
	<u>AND</u>	
	b) Ammeters for 4160V Station Service Buses A,B & C all indicate-ZERO (0) AMPS	
	<u>AND</u>	

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB H) ELECTRICAL FAILURE	REVISION 03
ATTACHMENT 1		PAGE 28 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
3. (CONTINUED)	c) Ammeters for 4160V Emergency Buses H & J both indicate-ZERO (0) AMPS	
4. Loss of all on-site DC power ALL MODES	All Station Battery voltmeters indicate-ZERO (0) VOLTS <u>AND</u> No light indication avail- able to Reserve Station Service Breakers 15D1, 15E1 and 15F1	Alert
5. Loss of all on-site DC power for-GREATER THAN 15 minutes ALL MODES	The following conditions exist for a period of- GREATER THAN <u>15</u> minutes a) All Station Battery volt- meters indicate-ZERO (0) VOLTS <u>AND</u> b) No light indication avail- able to Reserve Station Service Breakers 15D1, 15E1 and 15F1	Site Emergency

<p><u>NUMBER</u> EPIP-1.01</p>	<p><u>ATTACHMENT TITLE</u> EMERGENCY ACTION LEVEL TABLE (TAB I)</p>	<p><u>REVISION</u> 03</p>
<p><u>ATTACHMENT</u> 1</p>	<p>FIRE</p>	<p><u>PAGE</u> 29 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>1. Fire lasting-GREATER THAN 10 minutes ALL MODES</p>	<p>Fire within the Station which is not under control within 10 minutes after fire fighting efforts begin</p>	<p>Unusual Event</p>
<p>2. Fire potentially affecting station safety systems MODES 1,2,3,&4</p>	<p>Fire within the Station which has potential for causing a safety system <u>NOT</u> to be operable as defined by T.S.1.6 and 3.0.5</p>	<p>Alert</p>
<p>3. Fire resulting in degradation of safety systems MODES 1,2,3 & 4</p>	<p>Fire within the Station which causes major degradation of a safety system function required for protection of the public</p>	<p>Site Emergency</p>
<p><u>AND</u></p>		
<p>Affected systems are caused to be <u>NOT</u> operable as defined by T.S.1.6. and 3.0.5</p>		

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB J)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>SECURITY EVENT</p>	<p>PAGE 30 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>1. Security threat, unauthorized attempted entry, or attempted sabotage ALL MODES</p>	<p>Security Shift Supervisor has recommended Shift Supervisor declare an Unusual Event IAW. ADM-SPIP-35</p>	<p>Unusual Event</p>
<p>2. Ongoing Security compromise ALL MODES</p>	<p>Security Shift Supervisor has notified the Shift Supervisor of a confirmed unneutralized intrusion into the Protected Area</p>	<p>Alert</p>
<p>3. Imminent loss of physical Station control ALL MODES</p>	<p>Security Shift Supervisor has notified the Shift Supervisor of imminent intrusion into a Vital Area</p>	<p>Site Emergency</p>
<p>4. Loss of Station physical control ALL MODES</p>	<p>Shift Supervisor has been informed that the security force has been neutralized by attack, resulting in loss of physical control of station</p>	<p>General Emergency</p>
<p><u>OR</u></p>		
<p>Shift Supervisor has been informed of intrusion into one or more Vital Areas which are occupied <u>OR</u> controlled by an aggressor</p>		

<u>NUMBER</u> EPIP-1.01	<u>ATTACHMENT TITLE</u> EMERGENCY ACTION LEVEL TABLE (TAB K)	<u>REVISION</u> 03
<u>ATTACHMENT</u> 1	HAZARD TO STATION OPERATION	<u>PAGE</u> 31 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
1. Aircraft crash or unusual aircraft activity ALL MODES	Confirmed notification of aircraft crash within the site boundary <u>OR</u> Unusual aircraft activity in the vicinity of the site as determined by the Shift Supervisor <u>AND/OR</u> Security Shift Supervisor	Unusual Event
2. Aircraft crash on the facility ALL MODES	Aircraft crash within the Protected Area <u>OR</u> Aircraft crash in Station Switchyard	Alert
3. Aircraft damage to vital plant systems MODES 1,2,3 & 4	Aircraft crash which affects vital structures by impact or fire	Site Emergency
4. Train derailment on site ALL MODES	Confirmed report of train derailment onsite	Unusual Event
5. Onsite explosion ALL MODES	Confirmed report of unplanned explosion onsite	Unusual Event
6. Explosion damage to facility ALL MODES	Unplanned explosion resulting in damage to plant structure or equipment	Alert

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB K) HAZARD TO STATION OPERATION	REVISION 03
ATTACHMENT 1		PAGE 32 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
7. Severe explosive damage MODE 1,2,3 & 4	Explosion which results in severe degradation of any of the following systems required for safe shutdown: a) CVCS System <u>OR</u> b) ECCS System <u>OR</u> c) Main/Auxiliary Feedwater System	Site Emergency
8. On or near site release of toxic or flammable liquids or gases ALL MODES	Notification of unplanned release of toxic <u>OR</u> flammable agents which may affect safety of station personnel <u>OR</u> equipment	Unusual Event
9. Entry of toxic or flammable gases or liquids into plant facility ALL MODES	Notification of uncontrolled release of toxic <u>OR</u> flammable agent which cause: a) Evacuation of personnel from plant areas <u>AND</u> b) Safety related equipment is rendered inoperable	Alert
10. Entry of toxic or flammable gases into plant vital areas MODE 1,2,3 & 4	Notification of uncontrolled release of toxic <u>OR</u> flammable agents above life threatening or explosive limits into Vital Areas <u>AND</u>	Site Emergency

NUMBER EPIP-1.01	ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB K)	REVISION 03
ATTACHMENT 1	HAZARD TO STATION OPERATION	PAGE 33 of 38

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
10. (CONTINUED)	Any of the following occur: a) Evacuation of Vital Area required <u>OR</u> b) Degradation of safety systems resulting in less of a safety system function required for protection of the public	
11. Turbine rotating component failure with no casing penetration MODES 1 & 2	a) Failure of Turbine/Generator rotating equipment resulting in immediate unit shutdown	Unusual Event
12. Turbine failure or missile impact MODES 1 & 2	Failure of Turbine/Generator rotating equipment resulting in casing penetration <u>OR</u>	Alert
13. Missile damage to safety related equipment or structures MODES 1,2,3 & 4	Notification of missile impact causing damage to safety related equipment or structures	Alert
14. Severe missile damage to safety systems MODES 1,2,3 & 4	Missile impact causing severe degradation of safety systems required for unit shutdown	Site Emergency

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB L)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>NATURAL EVENTS</p>	<p>PAGE 34 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>1. Earthquake detected ALL MODES</p>	<p>Confirmed earthquake which activates the Event Alarm on the Strong Motion Accelerograph</p>	<p>Unusual Event</p>
<p>2. Earthquake greater than OBE levels ALL MODES</p>	<p>Confirmed earthquake which activates Event Alarm on the Strong Motion Accelerograph</p>	<p>Alert</p>
<u>AND</u>		
<p>Alarms on the Peak Shock Annunciator indicate a horizontal motion of- GREATER THAN or EQUAL TO <u>0.09 g</u> or a vertical motion of- GREATER THAN or EQUAL TO <u>0.06 g</u></p>		
<p>3. Earthquake greater than DBE levels MODES 1,2,3 & 4</p>	<p>Earthquake which activates the Event Alarm on the Strong Motion Accelerograph</p>	<p>Site Emergency</p>
<u>AND</u>		
<p>Alarms on the Peak Shock Annunciator indicates a horizontal motion of GREATER THAN or EQUAL TO <u>0.18 g</u> or a vertical motion of- GREATER THAN or EQUAL TO <u>0.12 g</u></p>		
<p>4. Tornado onsite ALL MODES</p>	<p>Tornado visually detected onsite</p>	<p>Unusual Event</p>
<p>5. Tornado striking facility ALL MODES</p>	<p>Tornado visually detected striking within the Protected Area or Switchyard</p>	<p>Alert</p>

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB L)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>NATURAL EVENTS</p>	<p>PAGE 35 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>6. High winds ALL MODES</p>	<p>Any of the following: a) System Operator notification of Hurricane watch for Louisa County <u>OR</u> b) Sustained wind speed onsite measured <u>OR</u> projected to be in excess of <u>73</u> mph</p>	<p>Unusual Event</p>
<p>7. Extreme winds MODES 1,2,3 & 4</p>	<p>Sustained extreme winds in excess of 78 mph caused by Hurricane <u>OR</u> other severe weather conditions</p>	<p>Alert</p>
<p>8. Severe winds MODES 1,2,3 & 4</p>	<p>Sustained severe winds in excess of 80 mph caused by Hurricane, Tornado <u>OR</u> other severe weather condition</p>	<p>Site Emergency</p>
<p>9. 50 year flood or low water level ALL MODES</p>	<p>Flood in the Lake Anna Reservoir with indicated level-GREATER THAN <u>254</u> feet MSL <u>OR</u> Low water level in the Lake Anna Reservoir with indicated level-LESS THAN <u>247</u> feet MSL</p>	<p>Unusual Event</p>
<p>10. Flood or low water level near design levels ALL MODES</p>	<p>Flood in the Lake Anna Reservoir with indicated level-GREATER THAN <u>263</u> feet MSL <u>OR</u></p>	<p>Alert</p>

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB L)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>NATURAL EVENTS</p>	<p>PAGE 36 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
10. (CONTINUED)	Low water level in the Lake Anna Reservoir with indi- cated level-LESS THAN <u>245</u> <u>feet MSL</u>	
11. Flood or low water level above design levels	Flood in the Lake Anna Reservoir with indicated level-GREATER THAN <u>280</u> <u>feet MSL</u>	Site Emergency
MODES 1,2,3 & 4	<u>OR</u>	
	Low water level in the Lake Anna Reservoir with indi- cated level-LESS THAN <u>244</u> <u>feet MSL</u>	

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB M)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>	<p>MISCELLANEOUS ABNORMAL EVENTS</p>	<p>PAGE 37 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>1. Station conditions which warrant increased awareness of state and/or local authorities</p>	<p>Shift supervisor judgement that any of the following exist:</p>	<p>Unusual Event</p>
<p>ALL MODES</p>	<p>a) Unit (s) placed in a Mode 3 or lower condition as a result of noncompliance with T.S. Limiting Condition for Operation</p>	
	<p><u>OR</u></p>	
	<p>b) Unit shutdown is other than a controlled shutdown</p>	
	<p><u>OR</u></p>	
	<p>c) Unit is in an uncontrolled condition during operation</p>	
	<p><u>OR</u></p>	
	<p>d) A condition exists which has the potential for escalation and, therefore, warrants notification</p>	
<p>2. Station conditions which warrant precautionary notification to the near-site public</p>	<p>Shift Supervisor/Station Emergency Manager judgement</p>	<p>Alert</p>
<p>ALL MODES</p>		
<p>3. Station conditions which warrant activation of emergency facilities monitoring teams or precautionary notification to the near-site public</p>	<p>Shift Supervisor/Station Emergency Manager judgement</p>	<p>Site Emergency</p>
<p>ALL MODES</p>		

<p>NUMBER EPIP-1.01</p>	<p>ATTACHMENT TITLE EMERGENCY ACTION LEVEL TABLE (TAB M)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>	<p>MISCELLANEOUS ABNORMAL EVENTS</p>	<p>PAGE 38 of 38</p>

<u>CONDITION/APPLICABILITY</u>	<u>INDICATION</u>	<u>CLASSIFICATION</u>
<p>4. Any major internal or external events which singly or in combination cause massive damage to station facilities</p>	<p>Shift Supervisor/Station Emergency Manager judgement</p>	<p>General Emergency</p>
<p>ALL MODES</p>		

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER</p> <p>EPIP-1.03</p>	<p>PROCEDURE TITLE</p> <p>RESPONSE TO ALERT</p> <p>(With No Attachments)</p>	<p>REVISION</p> <p>02</p> <hr/> <p>PAGE</p> <p>1 of 12</p>
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PURPOSE

- To provide guidance to the Station Emergency Manager during the progress of a classified ALERT emergency.

USER

Station Emergency Manager

ENTRY CONDITIONS

- Entry from EPIP-1.01, Emergency Manager Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
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NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02
		PAGE 2 of 12

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE
- a) Declare position of Station
Emergency Manager
- b) BY: _____
- DATE: _____
- TIME: _____

NOTE: The Shift Supervisor may be relieved as Station Emergency
Manager IAW the NAPS Emergency Plan.

2. INPLANT NOTIFICATION:
- a) From the Control Room,
sound the ALERT Alarm
- b) make announcement on plant
Gai-Tronics system as
follows:
- 1) "An ALERT has been
declared"
 - 2) "All Emergency Response
personnel report to
their assigned stations"
 - 3) "All visitors, 2000 and
3000 series badged
personnel report to the
Security Building"
 - 4) "All other personnel
report to their Emer-
gency Assembly Areas"

NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02
		PAGE 3 of 12

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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2. (CONTINUED)
- c) Repeat Steps 2a and 2b, THEN continue this instruction
3. ONSITE ACCOUNTABILITY:
- a) Initiate EPIP-5.03, Personnel Accountability
- b) Direct Security to initiate EPIP-5.04, Access Control
4. STATE AND COUNTY NOTIFICATION:
- a) Initiate EPIP-2.01, Notification of State and Local Governments
5. NRC NOTIFICATION:
- a) Initiate EPIP-2.02, Notification of NRC

NOTE: Updates to offsite authorities should be provided at approximately 15 minute intervals and after significant changes to plant status, radiological data, or meteorological data.

6. CALLOUT OF PERSONNEL:
- a) Verify Emergency Response Personnel - ONSITE

a) Direct Security to initiate EPIP-3.01, Call out of Emergency Response Personnel.

AND

GO TO Step 7 of this instruction.

NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02
		PAGE 4 of 12

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. (CONTINUED)

- b) Direct Security to activate Corporate Emergency Response Team by calling General Office Security IAW Section 1.2.1 of NAPS Telephone Directory

NOTE: Callout of rescue and fire personnel is accomplished by AP- 51 , Personnel Injury, and AP- 50 , Fire respectively.

7. EVALUATE STATION CONDITIONS:

- a) Unit(s) are NOT affected by emergency condition

1) Evaluate safety of any operating unit(s)

2) Consider unit(s) shutdown if emergency conditions so indicate

- a) IF a unit is affected, evaluate safe operation of unaffected unit.

AND

Consider unit shutdown if conditions so indicate.

8. VERIFY EMERGENCY CENTERS/FACILITIES:

- a) All emergency centers and facilities - ACTIVATED

b) GO TO Step 12 of this instruction

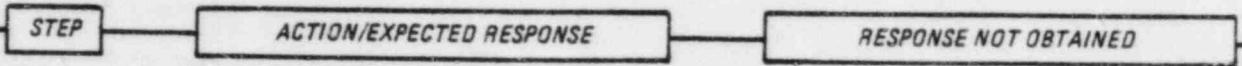
- a) GO TO Step 9 of this instruction.

9. VERIFY TSC ESTABLISHED:

- a) Check TSC NOT previously activated

- a) GO TO Step 10 of this instruction.

<p>NUMBER EPIP-1.03</p>	<p>PROCEDURE TITLE RESPONSE TO ALERT</p>	<p>REVISION 02</p>
		<p>PAGE 5 of 12</p>



9. (CONTINUED)

b) Relieve the Shift Supervisor as Station Emergency Manager b) IF no Shift Supervisor relief GO TO Step 10 of this instruction and return to Step 9 when appropriate.

1) BY: _____

DATE: _____

TIME: _____

c) If desired, relocate Station Emergency Manager position to TSC

d) Announce Station Emergency Manager name and location to offsite authorities

e) Verify TSC - ACTIVATED

e) Initiate activation of TSC IAW EPIP-3.02, Activation of Technical Support Center.

10. VERIFY OSC ESTABLISHED:

a) Check OSC NOT previously activated

a) GO TO Step 11 of this instruction.

b) Assign appropriate individual to position of OSC Director

c) Activate OSC IAW EPIP-3.03, Activation of Operational Support Center

11. VERIFY EOF ESTABLISHED:

a) Check EOF NOT previously activated

a) GO TO Step 12 of this instruction.

b) Activate EOF IAW EPIP-3.04, Activation of Emergency Operations Facility

NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02
		PAGE 6 of 12

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12.	VERIFY EPIP-4.01: a) Assure EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u> - ACTIVATED b) Check status of EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u> c) Verify Onsite Monitoring Team - ACTIVATED	a) Direct Health Physics to initiate EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure, THEN GO TO Step 13.</u>
13.	CHECK RADIOLOGICAL CONDITIONS: a) Radiological conditions <u>STABLE OR IMPROVING</u>	a) Confer with Radiological Assessment Director and Emergency Operations Director <u>AND</u> Initiate appropriate mitigating actions
14.	CHECK UNIT CONDITIONS: a) Reactor plants - STABLE	a) <u>IF</u> TSC activated confer with Emergency Operations Director <u>IF NOT</u> , confer with SRO-On-Call. <u>AND</u> Initiate appropriate mitigating actions.
15.	DAMAGE CONTROL: a) Damage to Station equipment has been verified	a) <u>GO TO</u> Step <u>16.</u>

<p>NUMBER</p> <p>EPIP-1.03</p>	<p>PROCEDURE TITLE</p> <p>RESPONSE TO ALERT</p>	<p>REVISION</p> <p>02</p>
		<p>PAGE</p> <p>7 of 12</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

15. (CONTINUED)

b) With Emergency Operations and Maintenance Directors, evaluate extent of damage

b) IF TSC NOT activated confer with senior operations and maintenance personnel onsite.

c) Evaluate following assistance requirements

1) Offsite Technical

2) Additional personnel

3) Material and Equipment

d) Instruct Emergency Maintenance Director to initiate EPIP-5.08, Damage Control

d) IF NOT available, initiate interim damage control activities.

16. VERIFY ONSITE CONDITIONS:

a) Evaluation indicates limited evacuation of buildings or areas - REQUIRED

a) GO TO Step 17.

b) Sound ALERT Alarm and make appropriate announcement using the plant Gai-Tronics system

17. FOLLOW-UP STATE/COUNTY NOTIFICATION:

a) Verify updated Health Physics dose assessments complete

b) Verify timely follow-up State/County notification LAW EPIP-2.01, Notification of State and Local Governments

b) Initiate EPIP-2.01, Notification of State and Local Governments.

NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02 PAGE 8 of 12
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
18.	FOLLOW-UP NRC NOTIFICATION:	
	a) Verify follow-up NRC notification IAW, EPIP-2.02, <u>Notification of NRC</u>	a) Initiate EPIP-2.02, <u>Notification of NRC.</u>
	<p><u>NOTE:</u> Updates to offsite authorities should be provided at approximately 15 minute intervals.</p>	
19.	ADDITIONAL REPORTING:	
	a) Direct the Emergency Administrative Director to evaluate reporting criteria IAW EPIP-2.03, <u>Reports to Offsite Agencies</u>	
	b) Initiate reporting requirements of EPIP-2.03, <u>Reports to Offsite Agencies</u>	
20.	VERIFY ACCOUNTABILITY:	
	a) All personnel accounted for IAW EPIP-5.03, <u>Personnel Accountability</u>	a) Initiate EPIP-5.02, <u>Search and Rescue.</u>
21.	SITE EVACUATION:	
	a) Radiological Assessment Director recommends site evacuation	a) <u>GO TO</u> Step <u>24.</u>
	b) Consider the following:	
	1) Onsite dose greater than <u>1</u> Rem whole body <u>OR</u> greater than <u>5</u> Remthyroid	
	2) Direction of plume travel	

NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02
		PAGE 9 of 12

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
22.	INITIATE SITE EVACUATION:	
	1) Initiate EPIP-5.05, <u>Site Evacuation</u>	
23.	EVACUATION NOTIFICATIONS:	
	a) Notify affected counties and Virginia EOC of evacuation initiation IAW EPIP-2.01, <u>Notification of State and Local Governments</u>	
	b) Notify NRC Operations Center of evacuation initiation IAW EPIP-2.02, <u>Notification of NRC</u>	
24.	EMERGENCY EXPOSURE:	
	a) Evaluation of conditions indicates authorization of emergency radiation exposure limits should be considered	a) <u>GO TO Step 25.</u>
	b) Implement EPIP-5.06, <u>Emergency Radiation Exposure Authorization</u>	
25.	BLOCKING AGENT:	
	a) On recommendation of Radiological Assessment Director evaluate issuance of Radioiodide blocking agent to onsite personnel if following exist	a) <u>GO TO Step 26.</u>
	1) Projected onsite total absorbed dose equivalent I-131-GREATER THAN <u>10 Rem</u>	

NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02
		PAGE 10 of 12

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

25. (CONTINUED)

OR

2) Actual onsite total absorbed dose equivalent I-131-GREATER THAN 10 Rem

b) Direct Radiological Assessment Director to implement EPIP-5.07, Administration of Radioprotective Drugs

26. VERIFY EVENTS:

a) Review EPIP-1.01, Attachment 1, Emergency Action Levels, and return to this step

b) Insure additional events have NOT occurred

b) Initiate station APs, EPs, or EPIPs to address new events.

AND

Notify Radiological Assessment Director

AND

Insure initiation of EPIP-2.01, Notification of State and Local Governments and EPIP-2.02, Notification of NRC

c) Check that emergency has NOT escalated

c) IF escalated, GO TO EPIP-1.01, Emergency Manager Controlling Procedure, Step 5.

NUMBER EPIP-1.03	PROCEDURE TITLE RESPONSE TO ALERT	REVISION 02
		PAGE 11 of 12

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

27. CHECK FOR TERMINATION:

a) Verify EALS - NOT EXCEEDEDANDb) Verify plant conditions -
SAFE AND STABLEANDc) Onsite and offsite
response personnel - NOT
REQUIREDd) GO TO Step 30 for terminationa) IF EALS are still exceeded,
GO TO Step 28.b) Evaluate conditions and GO TO
Step 7.c) Continue monitoring activi-
ties and GO TO Step 27.

28. CHECK FOR RECLASSIFICATION:

a) Step 26 indicates event
severity - REDUCEDb) Reclassify event and GO TO
Step 29 for procedure
terminationa) GO TO Step 7 of this in-
struction.

29. TERMINATE EPIP-1.03:

a) Verify Recovery Manager
concurrence

b) Close out

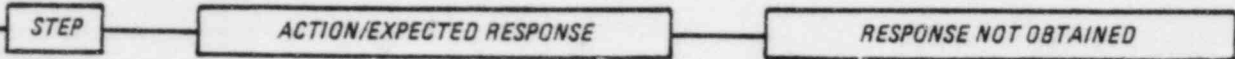
1) Initiate written summary
to offsite authorities
within 8 hours

2) COMPLETED BY: _____

DATE: _____

TIME: _____

<p>NUMBER EPIP-1.03</p>	<p>PROCEDURE TITLE RESPONSE TO ALERT</p>	<p>REVISION 02</p>
		<p>PAGE 12 of 12</p>



GO TO EPIP-1.01, Emergency
Manager Controlling Pro-
cedure, Step 6

30. EMERGENCY TERMINATION:

- a) Verify Recovery Manager concurrence
- b) Close out
 - 1) Initiate written summary to offsite authorities within 8 hours
 - 2) COMPLETED BY: _____
 - DATE: _____
 - TIME: _____
- c) GO TO EPIP-1.01, Emergency
Director Controlling Pro-
cedure, Step 8

END

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

<i>NUMBER</i>	<i>PROCEDURE TITLE</i>	<i>REVISION</i>
EPIP-1.04	RESPONSE TO SITE EMERGENCY (With No Attachments)	02
		<i>PAGE</i> 1 of 13

PURPOSE

1. To provide guidance to the Station Emergency Manager during the progress of a classified SITE emergency.

USER

Station Emergency Manager

ENTRY CONDITIONS

1. Entry from EPIP-1.01, Emergency Manager Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<i>APPROVAL RECOMMENDED</i> 	<i>APPROVED</i>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<i>DATE</i> 05-24-83
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NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 2 of 13

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:
- a) Declare position of Station
 Emergency Manager
- b) BY: _____
- DATE: _____
- TIME: _____

NOTE: The Shift Supervisor may be relieved as Station Emergency
Manager IAW the NAPS Emergency Plan.

2. INPLANT NOTIFICATION:
- a) From the Control Room,
 sound the ALERT Alarm
- b) Make announcement on plant
 Gai-Tronics system as
 follows:
- 1) "A SITE EMERGENCY has
 been declared"
- 2) "All Emergency Response
 personnel report to
 their assigned stations"
- 3) "All visitors, 2000 and
 3000 series badged
 personnel report to the
 Security Building"
- 4) "All other personnel
 report to their Emer-
 gency Assembly Areas"

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 3 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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2. (CONTINUED)
- c) Repeat Steps 2a and 2b,
THEN continue this instruction
3. ONSITE ACCOUNTABILITY:
- a) Initiate EPIP-5.03,
Personnel Accountability
- b) Direct Security to initiate
 EPIP-5.04, Access Control
4. STATE AND COUNTY NOTIFICATION:
- a) Initiate EPIP-2.01,
Notification of State
 and Local Governments
5. NRC NOTIFICATION:
- a) Initiate EPIP-2.02,
Notification of NRC

NOTE: Updates to offsite authorities should be provided at approximately 15 minute intervals and after significant changes to plant status, radiological data, or meteorological data.

6. CALLOUT OF PERSONNEL:
- a) Verify Emergency Response
 Personnel - ONSITE
- a) Direct Security to initiate
 EPIP-3.01, Call out of Emer-
 gency Response Personnel.

AND

GO TO Step 7 of this
 instruction.

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 4 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6.	(CONTINUED) b) Direct Security to activate Corporate Emergency Response Team by calling General Office Security IAW Section 1.2.1 of NAPS Telephone Directory	
NOTE: Callout of rescue and fire personnel is accomplished by AP- <u>51</u> , <u>Personnel Injury</u> , and AP- <u>50</u> , <u>Fire</u> , respectively.		
7.	EVALUATE STATION CONDITIONS: a) Unit(s) are <u>NOT</u> affected by emergency condition 1) Evaluate safety of any operating unit(s) 2) Consider unit(s) shutdown if emergency conditions so indicate	a) <u>IF</u> a unit is affected, evaluate safe operation of unaffected unit. <u>AND</u> Consider unit shutdown if conditions so indicate.
8.	VERIFY EMERGENCY CENTERS/ FACILITIES: a) All emergency centers and facilities - ACTIVATED b) <u>GO TO</u> Step <u>12</u> of this instruction	a) <u>GO TO</u> Step <u>9</u> of this instruction.

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 5 of 13

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

9. VERIFY TSC ESTABLISHED:

- a) Check TSC NOT previously activated
- b) Relieve the Shift Supervisor as Station Emergency Manager

1) BY: _____

DATE: _____

TIME: _____

- c) If desired, relocate Station Emergency Manager position to TSC
- d) Announce Station Emergency Manager name and location to offsite authorities
- e) Verify TSC - ACTIVATED

- a) GO TO Step 10 of this instruction.
- b) IF Shift Supervisor relief NOT available GO TO Step 10 of this instruction and return to Step 9 when appropriate.

- e) Initiate activation of TSC IAW EPIP-3.02, Activation of Technical Support Center.

10. VERIFY OSC ESTABLISHED:

- a) Check OSC NOT previously activated
- b) Assign appropriate individual to position of OSC Director
- c) Activate OSC IAW EPIP-3.03, Activation of Operational Support Center

- a) GO TO Step 11 of this instruction.

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 6 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
11.	VERIFY EOF ESTABLISHED: a) Check EOF <u>NOT</u> previously activated b) Activate EOF IAW EPIP-3.04, <u>Activation of Emergency Operations Facility</u>	a) <u>GO TO</u> Step <u>12</u> of this instruction.
12.	VERIFY EPIP-4.01: a) Assure EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u> - ACTIVATED b) Check status of EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u> c) Verify Onsite Dose Assessment Team (s) - ACTIVATED	a) Direct Health Physics to initiate EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u> , <u>THEN GO TO</u> Step <u>13</u> .
13.	CHECK RADIOLOGICAL CONDITIONS: a) Radiological conditions - <u>STABLE OR IMPROVING</u>	a) Confer with Radiological Assessment Director and Emergency Operations Director. <u>AND</u> Initiate appropriate mitigating actions.
14.	CHECK UNIT CONDITIONS: a) Reactor plant(s) - STABLE	a) Confer with Emergency Operations Director. <u>AND</u>

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 7 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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- | | | |
|-----|---|---|
| 14. | (CONTINUED) | |
| | | Initiate appropriate mitigating actions. |
| 15. | DAMAGE CONTROL: | |
| | a) Damage to Station Equipment has been verified | a) <u>GO TO</u> Step <u>16</u> . |
| | b) With Emergency Operations and Maintenance Directors, evaluate extent of damage | b) <u>IF TSC NOT</u> manned confer with senior operations and maintenance personnel onsite. |
| | c) Evaluate following assistance requirements | |
| | 1) Offsite Technical | |
| | 2) Additional personnel | |
| | 3) Material and Equipment | |
| | d) Instruct Emergency Maintenance Director to initiate EPIP-5.08, <u>Damage Control</u> | d) <u>IF NOT</u> available, initiate interim damage control activities. |
| 16. | VERIFY ONSITE CONDITIONS: | |
| | a) Evaluation indicates limited evacuation of buildings or areas - REQUIRED | a) <u>GO TO</u> Step <u>17</u> of this instruction. |
| | b) Sound ALERT Alarm and make appropriate announcement using the plant Gai-Tronics system | |
| 17. | FOLLOW-UP STATE/COUNTY NOTIFICATION: | |
| | a) Verify updated Health Physics dose assessments completed | |

NUMBER	PROCEDURE TITLE	REVISION 02
EPIP-1.04	RESPONSE TO SITE EMERGENCY	PAGE 8 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
17.	(CONTINUED)	
	b) Verify timely follow-up State/County notification IAW EPIP-2.01, <u>Notification of State and Local Governments</u>	b) Initiate EPIP-2.01, <u>Notification of State and Local Governments.</u>
18.	FOLLOW-UP NRC NOTIFICATION:	
	a) Verify follow-up NRC notification IAW EPIP-2.02, <u>Notification of NRC</u>	a) Initiate EPIP-2.02, <u>Notification of NRC.</u>
	<u>NOTE:</u> Updates to offsite authorities should be provided at approximately 15 minute intervals.	
19.	ADDITIONAL REPORTING:	
	a) Direct the Emergency Administrative Director to evaluate reporting criteria IAW EPIP-2.03, <u>Reports to Offsite Agencies</u>	
	b) Initiate reporting requirements of EPIP-2.03, <u>Reports to Offsite Agencies</u>	
20.	VERIFY ACCOUNTABILITY:	
	a) All personnel accounted for IAW EPIP-5.03, <u>Personnel Accountability</u>	a) Initiate EPIP-5.02, <u>Search and Rescue.</u>
21.	SITE EVACUATION:	
	a) Radiological Assessment Director recommends site evacuation	a) <u>GO TO Step 23.</u>

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 9 of 13

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

21. (CONTINUED)
- b) Consider the following:
- 1) Onsite dose greater than 1 Rem whole body OR greater than 5 Rem thyroid exposure
 - 2) Characteristics and direction of the plume
 - 3) Contamination vs. personnel safety and exposure
22. INITIATE SITE EVACUATION:
- a) Implement EPIP-5.05, Site Evacuation
23. OFFSITE RECOMMENDATIONS:
- a) Radiological Assessment Director recommends near-site sheltering or evacuation
- a) GO TO Step 25.
- b) Consider the following:
- 1) Site boundry doses of 0.5 Rem to 2 Rem whole body, OR 1 Rem to 12 Rem thyroid exposure
 - 2) Characteristics and direction of plume
- c) GO TO Step 24 and make appropriate recommendations to offsite agencies

<p>NUMBER</p> <p>EPIP-1.04</p>	<p>PROCEDURE TITLE</p> <p>RESPONSE TO SITE EMERGENCY</p>	<p>REVISION</p> <p>02</p>
		<p>PAGE</p> <p>10 of 13</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
24.	<p>EVACUATION/RECOMMENDATION NOTIFICATIONS:</p> <p>a) Notify affected counties and Virginia EOC of evacuation initiation IAW EPIP-2.01, <u>Notification of State and Local Governments</u></p> <p>b) Notify NRC Operations Center of evacuation initiation IAW EPIP-2.02, <u>Notification of NRC</u></p>	
25.	<p>EMERGENCY EXPOSURE:</p> <p>a) Evaluation of conditions indicates authorization of emergency radiation exposure limits should be considered</p> <p>b) Implement EPIP-5.06, <u>Emergency Radiation Exposure Authorization</u></p>	a) <u>GO TO Step 26</u>
26.	<p>BLOCKING AGENT:</p> <p>a) On recommendation of Radiological Assessment Director evaluate issuance of Radioiodide blocking agent to onsite personnel if following exist</p>	a) <u>GO TO Step 27.</u>

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

26. (CONTINUED)

1) Projected onsite total absorbed dose equivalent I-131-GREATER THAN 10 Rem

OR

2) Actual onsite total absorbed dose equivalent I-131-GREATER THAN 10 Rem

b) Direct Radiological Assessment Director to implement EPIP-5.07, Administration of Radioprotective Drugs

27. VERIFY EVENTS:

a) Review EPIP-1.01, Attachment 1, Emergency Action Levels, and return to Step 27b

b) Insure additional events have NOT occurred

b) Initiate station APs, EPs, or EIPs to address new events.

AND

Notify Radiological Assessment Director.

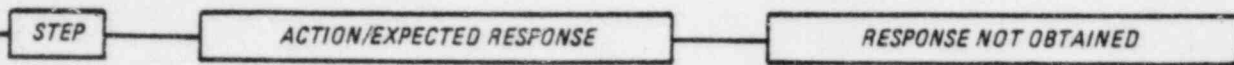
AND

Insure initiation of EPIP-2.01, Notification of State and Local Governments and EPIP-2.02, Notification of NRC.

NUMBER EPIP-1.04	PROCEDURE TITLE RESPONSE TO SITE EMERGENCY	REVISION 02
		PAGE 12 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
27.	(CONTINUED) c) Check that emergency has <u>NOT</u> escalated	c) <u>IF</u> escalated, <u>GO TO</u> EPIP-1.01, <u>Emergency Manager Controlling Procedure</u> , Step <u>6</u> .
28.	CHECK FOR TERMINATION: a) Verify EALS - <u>NOT</u> EXCEEDED <u>AND</u> b) Verify plant conditions - SAFE AND STABLE <u>AND</u> c) Onsite and offsite response personnel - <u>NOT</u> REQUIRED d) <u>GO TO</u> Step <u>31</u> for termination	a) <u>IF</u> EALS are still exceeded, <u>GO TO</u> Step <u>29</u> . b) Evaluate conditions and <u>GO TO</u> Step <u>7</u> . c) Continue monitoring activities and <u>GO TO</u> Step <u>29</u> .
29.	CHECK FOR RECLASSIFICATION: a) Step <u>27</u> indicates event severity - REDUCED b) Reclassify event and <u>GO TO</u> Step <u>30</u> for procedure termination	a) <u>GO TO</u> Step <u>7</u> of this instruction.
30.	TERMINATE EPIP-1.04: a) Verify Recovery Manager concurrence b) Close out 1) Initiate briefing of off-site authorities at EOF and by phone	

<p>NUMBER EPIP-1.04</p>	<p>PROCEDURE TITLE RESPONSE TO SITE EMERGENCY</p>	<p>REVISION 02</p>
		<p>PAGE 13 of 13</p>



30. (CONTINUED)

2) Initiate written summary
to offsite authorities
within 8 hours

3) COMPLETED BY: _____
DATE: _____
TIME: _____

b) GO TO EPIP-1.01, Emergency
Manager Controlling Pro-
cedure, Step 6

31. EMERGENCY TERMINATION:

a) Verify Recovery Manager
concurrence

b) Close out

1) Initiate briefing of
offsite authorities at
EOF and by phone

2) Initiate written summary
to offsite authorities
within 8 hours

3) COMPLETED BY: _____
DATE: _____
TIME: _____

c) GO TO EPIP-1.01, Emergency
Director Controlling Pro-
cedure, Step 8

END

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER</p> <p>EPIP-1.05</p>	<p>PROCEDURE TITLE</p> <p>RESPONSE TO GENERAL EMERGENCY</p> <p>(With No Attachments)</p>	<p>REVISION</p> <p>02</p> <p>PAGE</p> <p>1 of 21</p>
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PURPOSE

1. To provide guidance to the Station Emergency Manager during the progress of a classified GENERAL emergency.

USER

Station Emergency Manager

ENTRY CONDITIONS

1. Entry From EPIP-1.01, Emergency Manager Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
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NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
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STEP

ACTION/EXPECTED RESPONSE

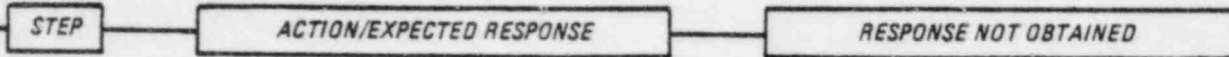
RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:
- a) Declare position of Station Emergency Manager
 - b) BY: _____
DATE: _____
TIME: _____

NOTE: The Shift Supervisor may be relieved as Station Emergency Manager IAW the NAPS Emergency Plan.

2. INPLANT NOTIFICATION:
- a) From the Control Room, sound the ALERT Alarm
 - b) Make announcement on plant Gai-Tronics system as follows:
 - 1) "A GENERAL EMERGENCY has been declared"
 - 2) "All Emergency Response personnel report to their assigned stations"
 - 3) "All visitors, 2000 and 3000 series badges personnel report to the Security Building"
 - 4) "All other personnel report to their Emergency Assembly Areas"

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
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2. (CONTINUED)
- c) Repeat Steps 2a and 2b, THEN continue this instruction
3. ONSITE ACCOUNTABILITY:
- a) Initiate EPIP-5.03, Personnel Accountability
- b) Direct Security to initiate EPIP-5.04, Access Control

NOTE: The following Steps 4 thru 11 determine the offsite protective actions to be recommended for various General Emergency situations.

4. CORE MELT AND LOCA WITH CONTAINMENT FAILURE IMMINENT OR OCCURING:
- a) Following conditions have been met:
- 1) RCS specific activity - GREATER THAN 3000 uCi/gram dose equivalent I-131
- OR
- 5 or more core exit thermocouples - GREATER THAN 2000°F
- 2) Containment High Range Radiation Monitor - GREATER THAN 10⁴ mR/hr

a) GO TO Step 5 of this instruction.

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

3) Containment failure
 imminent as indicated
 by pressure - GREATER
 THAN 60 psia and NOT
 DECREASING

OR

Shift Supervisor judge-
 ment that containment
 failure has occurred

b) Determining protective
 actions:

1) Determine wind speed and
 affected sectors

a) IF wind speed LESS
THAN 2.5 mph recom-
 mend sheltering out
 to and including Zone
 5 in affected sectors

AND

Recommend evacuation
 in Zones 6 thru 10 in
 affected sectors

AND

Recommend evacuation
 out to and including
 Zone 5 in unaffected
 sectors

b) Request Radiological Assess-
 ment Director aid in determi-
 nation of sheltering recom-
 mendations IAW EPIP-4.01,
Radiological Assessment
Director Controlling
Procedure.

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 5 of 21

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

- b) IF wind speed GREATER THAN 2.5 mph recommend sheltering out to and including Zone 10 in affected sectors

AND

Recommend evacuation out to and including Zone 5 in unaffected sectors

- c) GO TO Step 12

5. CORE MELT AND S/G TUBE RUPTURE WITH STEAM BREAK:

- a) Following conditions have been met:

a) GO TO Step 6 of this instruction.

- 1) RCS specific activity-
GREATER THAN 3000 uCi/gram
dose equivalent I-131

OR

5 or more core exit thermocouples-GREATER THAN 2000°F

- 2) S/G tube rupture flow greater than capacity of two (2) Charging/SI pumps
- 3) Major S/G secondary depressurization as indicated by one or more S/G's MS lines below MS header by - GREATER THAN 100 psig

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 6 of 21

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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5. (CONTINUED)

b) Determine protective actions and offsite recommendations IAW Step 4.b Page 4 of 21 of this instruction, THEN GO TO Step 12.

b) Request Radiological Assessment Director aid in determination of sheltering recommendations IAW EPIP-4.01, Radiological Assessment Director Controlling Procedure.

c) GO TO Step 12

6. CORE MELT AND LOCA WITH CONTAINMENT FAILURE LIKELY:

a) Following conditions have been met:

a) GO TO Step 7 of this instruction.

1) RCS specific activity-
GREATER THAN 3000.0 μ Ci/gram dose equivalent I-131

OR

5 or more core exit thermocouples-GREATER THAN 2000° F

2) Containment High Range Radiation Monitor -
GREATER THAN 10⁴ mR/hr

3) Containment failure is likely as indicated by significantly impaired ECCS and pressure-GREATER THAN 27.75 psia

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 7 of 21

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. (CONTINUED)

b) Recommend the following:

- 1) Evacuation of the population within a radius out to and including Zone 5 (360°)
- 2) Evacuation of the population out to and including Zone 10 in downwind and adjacent sectors (67½° total)

c) GO TO Step 12

b) Request Radiological Assessment Director aid in determination of evacuation recommendations IAW EPIP-4.01, Radiological Assessment Director Controlling Procedure.

7. CORE MELT AND LOCA WITH CONTAINMENT FAILURE NOT LIKELY:

a) Following conditions have been met:

- 1) RCS specific activity-
GREATER THAN 3000.0 μ Ci/gram dose equivalent I-131

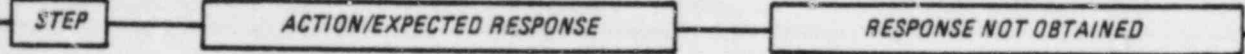
AND

5 or more core exit thermocouples-GREATER THAN 2000°F

- 2) Containment High Range Radiation Monitor - GREATER THAN 10^4 mR/hr
- 3) Containment failure is NOT likely as indicated by pressure - LESS THAN 27.75 psia AND DECREASING

a) GO TO Step 8 of this instruction.

<p>NUMBER EPIP-1.05</p>	<p>PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY</p>	<p>REVISION 02</p>
		<p>PAGE 8 of 21</p>



7. (CONTINUED)

b) Recommend the following:

- 1) Evacuation of the population within a radius out to and including Zone 2 (360°)
- 2) Evacuation of the population out to and including Zone 5 in downwind and adjacent sectors (67½° total)
- 3) Sheltering in Zones 5 out to 10 in downwind and adjacent sectors (67½° total)

b) Request Radiological Assessment Director aid in determination of evacuation recommendations IAW EPIP-4.01, Radiological Assessment Director Controlling Procedure.

c) GO TO Step 12

8. LOW CONTAINMENT ACTIVITY:

a) Following conditions have been met:

- 1) RCS specific activity-
GREATER THAN 3000.0 µCi/gram dose equivalent I-131

OR

5 or more core exit thermocouples-GREATER THAN 2000°F

- 2) Containment High Range Radiation Monitor -
LESS THAN 10² mR/hr

a) GO TO Step 9 of this instruction.

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02 PAGE 9 of 21
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

8. (CONTINUED)

3) Containment pressure-
 LESS THAN 17.0 psia
 AND NOT INCREASING

b) Recommend evacuation within
 a radius out to and including
 Zone 2 (360°)

c) GO TO Step 12

b) Request Radiological Assess-
ment Director aid in determi-
 nation of evacuation recom-
 mendations IAW EPIP-4.01,
Radiological Assessment
Director Controlling
Procedure.

9. S/G TUBE RUPTURE WITH MS SAFETY
 LIFT LIKELY:

a) Following conditions have
 been met:

1) RCS specific activity-
 GREATER THAN 3000.0 uCi/
gram dose equivalent I-131

OR

5 or more core exit
 thermocouples -
 GREATER THAN 2000°F

2) S/G tube rupture flow
 greater than the capacity
 of one (1) Charging/SI
 pump

3) Shift Supervisor judgement
 that lifting of MS safety
 valve(s) is likely

a) GO TO Step 10 of this in-
 struction.

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 10 of 21

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

9. (CONTINUED)

b) Recommend the following:

- 1) Evacuation of the population within a radius out to and including Zone 2 (360°)
- 2) Evacuation of the population out to and including Zone 5 in downwind and adjacent sections (67½° total)
- 3) Sheltering in Zones 5 out to 10 in down wind and adjacent sectors (67½° Total)

c) GO TO Step 12

10. SIGNIFICANT RELEASE POTENTIAL:

a) Any of the following exist:

- 1) Projected site boundry doses exceed 2 Rem whole-body or 12 Rem thyroid exposure

OR

- 2) Control of physical security of station lost

b) Recommend evacuation within a radius out to and including Zone 2 (360°)

b) Request Radiological Assessment Director aid in determination of evacuation recommendations IAW EPIP-4.01, Radiological Assessment Director Controlling Procedure.a) GO TO Step 11 of this instruction.b) Request Radiological Assessment Director aid in determination of evacuation recommendations IAW EPIP-4.01, Radiological Assessment Director Controlling Procedure.

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 11 of 21

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
10.	(CONTINUED)	
	c) <u>GO TO Step 12</u>	
11.	MISCELLANEOUS EVENTS:	
	a) A General Emergency has been declared for any reason other than those specifically mentioned	
	<u>OR</u>	
	Shift Supervisor/Emergency Manager judgement indicates actions required to protect the health and safety of the public	
	b) Recommend the following:	b) Request <u>Radiological Assessment Director</u> aid in determination of sheltering recommendations IAW EPIP-4.01, <u>Radiological Assessment Director Controlling Procedure</u>
	1) Sheltering of the population within a radius out to and including Zone 2 (360°)	
	2) Sheltering of the population out to and including Zone 5 in downwind and adjacent sectors (67½° total)	
	c) <u>GO TO Step 12</u>	
12.	STATE AND COUNTY NOTIFICATION:	
	a) Initiate EPIP-2.01, <u>Notification of State and Local Governments</u>	
13.	NRC NOTIFICATION:	
	a) Notify NRC Operations Center IAW EPIP-2.02, <u>Notification of NRC</u>	

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 12 of 21

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: Updates to offsite authorities should be provided at approximately 15 minute intervals and after significant changes to plant status, radiological data, or meteorological data.

14. CALLOUT OF PERSONNEL:

a) Verify Emergency Response Personnel - ONSITE

a) Direct Security to initiate EPIP-3.01, Call out of Emergency Response personnel.

AND

GO TO Step 15 of this instruction

b) Direct Security to activate Corporate Emergency Response Team by calling General Office Security IAW Section 1.2.1 of NAPS Telephone Directory

NOTE: Callout of rescue and fire personnel is accomplished by AP- 51, Personnel Injury/Overexposure and AP 50, Fire respectively.

15. EVALUATE STATION CONDITIONS:

a) Unit(s) are NOT affected by emergency condition

a) IF a unit is affected, evaluate safe operation of unaffected unit.

AND

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 13 of 21

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
15.	(CONTINUED)	
	1) Evaluate safety of any operating unit	Consider unit shutdown if conditions so indicate.
	2) Consider unit shutdown if emergency conditions so indicate	
16.	VERIFY EMERGENCY CENTERS/FACILITIES:	
	a) All emergency centers and facilities - ACTIVATED	a) <u>GO TO Step 17</u> of this instruction.
	b) <u>GO TO Step 20</u> of this instruction	
17.	VERIFY TSC ESTABLISHED:	
	a) Check TSC <u>NOT</u> previously activated	a) <u>GO TO Step 18</u> of this instruction.
	b) Relieve the Shift Supervisor as Emergency Manager	b) <u>IF</u> Shift Supervisor relief <u>NOT</u> available <u>GO TO Step 18</u> of this instruction and return to Step <u>17</u> when appropriate.
	1) BY: _____	
	DATE: _____	
	TIME: _____	
	c) If desired, relocate Emergency Manager position to TSC	
	d) Announce Station Emergency Manager name and location to offsite authorities	
	e) Verify TSC - ACTIVATED	e) Initiate activation of TSC IAW EPIP-3.02, <u>Activation of Technical Support Center.</u>

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02 PAGE 14 of 21
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

18. VERIFY OSC ESTABLISHED:

a) Check OSC NOT previously activateda) GO TO Step 19 of this instruction.

b) Assign appropriate individual to position of OSC Director

c) Activate OSC IAW EPIP-3.03, Activation of Operational Support Center

19. VERIFY EOF ESTABLISHED:

a) Check EOF NOT previously activateda) GO TO Step 20 of this instruction.b) Activate EOF IAW EPIP-3.04, Activation of Emergency Operations Facility

20. VERIFY EPIP-4.01:

a) Check status of EPIP-4.01, Radiological Assessment Director Controlling Procedure

b) Verify onsite Dose Assessment Team(s) - ACTIVATED

c) Verify offsite dose Assessment Team(s) - ACTIVATED

21. CHECK RADIOLOGICAL CONDITIONS:

a) Radiological conditions - STABLE OR IMPROVING

a) Confer with Radiological Assessment Director and Emergency Operations Director.

AND

Initiate appropriate mitigating actions.

<p>NUMBER</p> <p>EPIP-1.05</p>	<p>PROCEDURE TITLE</p> <p>RESPONSE TO GENERAL EMERGENCY</p>	<p>REVISION</p> <p>02</p>
		<p>PAGE</p> <p>15 of 21</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
22.	<p>CHECK UNIT CONDITIONS:</p> <p>a) Reactor plant(s) - STABLE</p>	<p>a) Confer with Emergency Operations Director.</p> <p style="text-align: center;"><u>AND</u></p> <p>Initiate appropriate mitigating actions.</p>
23.	<p>DAMAGE CONTROL:</p> <p>a) Damage to station equipment has been verified</p> <p>b) With Emergency Operations and Maintenance Directors, evaluate extent of damage</p> <p>c) Evaluate following assistance requirements</p> <p style="margin-left: 20px;">1) Offsite Technical</p> <p style="margin-left: 20px;">2) Additional personnel</p> <p style="margin-left: 20px;">1) Material and Equipment</p> <p>d) Instruct Emergency Maintenance Director to initiate EPIP-5.08, <u>Damage Control</u></p>	<p>a) <u>GO TO</u> Step <u>24</u>.</p> <p>b) <u>IF TSC NOT</u> manned confer with senior operations and maintenance personnel onsite.</p> <p>d) <u>IF NOT</u> available, initiate interim damage control activities.</p>
24.	<p>VERIFY ONSITE CONDITIONS:</p> <p>a) Evaluation indicates limited evacuation of buildings or areas - REQUIRED</p> <p>b) Sound ALERT Alarm and make appropriate announcement using the plant Gai-Tronics system</p>	<p>a) <u>GO TO</u> Step <u>25</u> of this instruction.</p>

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 16 of 21

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
25.	FOLLOW-UP STATE/COUNTY NOTIFICATION: a) Verify updated Health Physics dose assessments completed b) Verify timely follow-up State/County notification IAW EPIP-2.01, <u>Notification of State and Local Governments</u>	b) Initiate EPIP-2.01, <u>Notification of State and Local Governments.</u>
26.	FOLLOW-UP NRC NOTIFICATION: a) Verify follow-up NRC notification IAW, EPIP-2.02, <u>Notification of NRC</u>	a) Initiate EPIP-2.02, <u>Notification of NRC.</u>
<p><u>NOTE:</u> Updates to offsite authorities should be provided at approximately 15 minute intervals.</p>		
27.	ADDITIONAL REPORTING: a) Direct the Emergency Administrative Director to evaluate reporting criteria IAW EPIP-2.03, <u>Reports to Offsite Agencies</u> b) Initiate reporting requirements of EPIP-2.03, <u>Reports to Offsite Agencies</u>	
28.	VERIFY ACCOUNTABILITY: a) All personnel accounted for IAW EPIP-5.03, <u>Personnel Accountability</u>	a) Initiate EPIP-5.02, <u>Search and Rescue.</u>

<p>NUMBER</p> <p>EPIP-1.05</p>	<p>PROCEDURE TITLE</p> <p>RESPONSE TO GENERAL EMERGENCY</p>	<p>REVISION</p> <p>02</p> <hr/> <p>PAGE</p> <p>17 of 21</p>
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
29.	<p>SITE EVACUATION:</p> <p>a) Radiological Assessment Director recommends site evacuation</p> <p>b) Consider the following:</p> <p>1) Onsite dose greater than <u>1</u> Rem whole body <u>OR</u> greater than <u>5</u> Rem thyroid exposure</p> <p>2) Characteristics and direction of the plume</p> <p>3) Contamination vs. per- sonnel safety and ex- posure</p>	a) <u>GO TO</u> Step <u>32</u> .
30.	<p>INITIATE SITE EVACUATION:</p> <p>a) Implement EPIP-5.05, <u>Site Evacuation</u></p>	
31.	<p>EVACUATION/RECOMMENDATION NOTIFICATION:</p> <p>a) Notify affected counties and Virginia EOC of evacuation initiation LAW EPIP-2.01, <u>Notification of State and Local Governments</u></p> <p>b) Notify NRC Operations Center of evacuation initiation LAW EPIP-2.02, <u>Notification of NRC</u></p>	
32.	<p>EMERGENCY EXPOSURE:</p> <p>a) Evaluation of conditions indicates authorization of emergency radiation expo- sure limits should be considered</p>	a) <u>GO TO</u> Step <u>33</u> .

<p>NUMBER EPIP-1.05</p>	<p>PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY</p>	<p>REVISION 02</p>
		<p>PAGE 18 of 21</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

32. (CONTINUED)

b) Implement EPIP-5.06,
Emergency Radiation Exposure
Authorization

33. BLOCKING AGENT:

a) On recommendation of
Radiological Assess-
ment Director evaluate
issuance of Radiiodide
blocking agent to onsite
personnel if following
exist:

a) GO TO Step 34.

1) Projected onsite total
absorbed dose equiva-
lent I-131-GREATER
THAN 10 Rem

OR

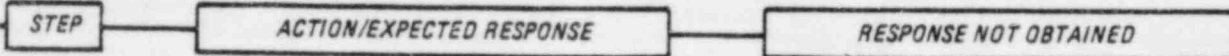
2) Actual onsite total
absorbed dose equiv-
alent I-131-GREATER
THAN 10 Rem

b) Direct Radiological
Assessment Director to
implement EPIP-5.07,
Administration of
Radioprotective Drugs

34. VERIFY EVENTS:

a) Review EPIP-1.01, Attach-
ment 1, Emergency Action
Levels, AND return to
Step 34.b

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 19 of 21



34. (CONTINUED)

b) Insure additional events have NOT occurred

b) Initiate station APs, EPs, or EPIPs to address new events.

AND

Notify Radiological Assessment Director.

AND

Insure initiation of EPIP-2.01, Notification of State and Local Governments and EPIP-2.02, Notification of NRC.

c) Check emergency conditions-
CHANGED

c) GO TO Step 4 to verify recommendations.

1) IF condition - IMPROVED -
GO TO Step 35

2) IF condition - DEGRADED -
GO TO Step 4 for reevaluation of recommendations

35. CHECK FOR TERMINATION:

a) Verify EALS - NOT EXCEEDED

a) IF EALS are still exceeded,
GO TO Step 36.

AND

b) Verify plant conditions -
SAFE AND STABLE

b) Evaluate conditions and GO TO
Step 4.

AND

c) Onsite and offsite
response personnel - NOT
REQUIRED

c) Continue monitoring activities and GO TO
Step 36.

d) GO TO Step 38 to terminate

NUMBER EPIP-1.05	PROCEDURE TITLE RESPONSE TO GENERAL EMERGENCY	REVISION 02
		PAGE 20 of 21

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

36. CHECK FOR RECLASSIFICATION:

a) Step 34 indicates event severity - REDUCED

a) GO TO Step 4 of this instruction.

b) Reclassify event and GO TO Step 37 for procedure termination

37. TERMINATE EPIP-1.05:

a) Verify Recovery Manager concurrence

b) Close out

1) Initiate briefing of off-site authorities at EOF and by phone

2) Initiate written summary to offsite authorities within 8 hours

3) COMPLETED BY: _____

DATE: _____

TIME: _____

c) GO TO EPIP-1.01, Emergency Manager Controlling Procedure Step 6

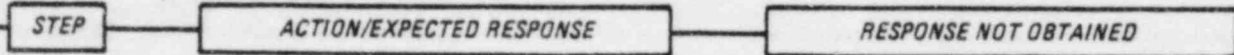
38. EMERGENCY TERMINATION:

a) Verify Recovery Manager concurrence

b) Close out

1) Initiate briefing of offsite authorities at EOF and by phone

<p><i>NUMBER</i></p> <p>EPIP-1.05</p>	<p><i>PROCEDURE TITLE</i></p> <p>RESPONSE TO GENERAL EMERGENCY</p>	<p><i>REVISION</i></p> <p>02</p>
		<p><i>PAGE</i></p> <p>21 of 21</p>



38. (CONTINUED)

2) Initiate written summary
to offsite authorities
within 8 hours

3) COMPLETED BY: _____

DATE: _____

TIME: _____

c) GO TO EPIP-1.01, Emergency
Director Controlling Pro-
cedure Step 8

END

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS (With 2 Attachments)	03 PAGE 1 of 16

PURPOSE

1. To initially notify state and local governments of the declaration of an emergency;
2. To provide periodic status updates to state and local governments during an emergency; AND
3. To notify state and local governments of any change in emergency status. AND

USER
 Emergency Communicator OR Station Emergency Manager.

ENTRY CONDITIONS

Any one of the following:

1. Emergency is declared;
2. Approximately 30 minutes have passed since last notification; OR
3. The status of any notification item has changed; OR
4. Entry directed by Station Emergency Manager. OR

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED 	APPROVED  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	DATE 05-24-83
---	--	------------------

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03 <hr/> PAGE 2 of 16
---------------------	--	---

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: The initial notification of an emergency must be made within 15 minutes following declaration of the emergency.

Follow-up reports of emergency conditions should be sent approximately every 30 minutes or when there are changes in emergency conditions.

1. INITIATE PROCEDURE:

a) INITIATED BY: _____
 TIME: _____
 DATE: _____

2. OBTAIN EMERGENCY REPORT FORM:

a) Attachment 1, Report of Emergency to State and Local Governments, located at back of this procedure

a) IF NOT attached, THEN obtain from procedure file.

3. OBTAIN EMERGENCY STATUS INFORMATION:

a) Obtain information from status board

a) Obtain from Station Emergency Manager.

b) Record in Items 1 thru 6 of Attachment 1

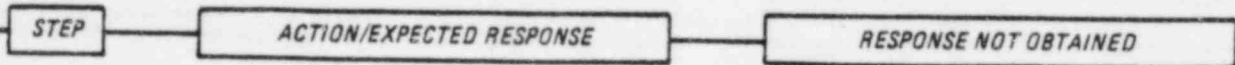
NOTE: Wind direction is always given as the compass point, NOT the degrees, the wind is blowing from. Example: Wind direction is from the East North East (ENE).

4. DETERMINE WIND DIRECTION:

a) IF in Control Room, obtain from Met. Panel

a) IF NOT, contact Control Room and request data.

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 3 of 16



4. (CONTINUED)

- b) Read wind direction degrees from "Main Tower Upper Wind Direction" Recorder.
- b) IF NOT operable, read "Backup Tower Wind Direction" Recorder.
- c) Use wind direction degrees AND Table 1 to determine compass point wind is blowing from

TABLE 1

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

- d) Record compass point in item 7 of Attachment 1

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 4 of 16

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

5. DETERMINE WIND SPEED:

- a) IF in Control Room, obtain from Met. Panel
- b) Read wind speed from "Main Tower Upper Wind Speed" Recorder.
- c) Record wind speed in Item 7 of Attachment 1

- a) IF NOT, contact Control Room and request data.
- b) IF NOT operable, read "Backup Tower Wind Speed" Recorder.

6. CHECK RADIOACTIVE RELEASE STATUS:

- a) Release-HAS OCCURRED
- OR
- Release-IS OCCURRING
- OR
- Release-IS PROJECTED

- a) IF NOT, record "None" in Item 8 of Attachment 1,

AND

GO TO Step 10.

7. DETERMINE AFFECTED SECTORS:

- a) Use wind direction from Item 7 of Attachment 1

AND

Table 4 to determine affected sectors

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 5 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

7. (CONTINUED)

TABLE 4

COMPASS POINT	AFFECTED SECTORS	COMPASS POINT	AFFECTED SECTORS
N	<u>H</u> otel- <u>J</u> uli <u>e</u> tt- <u>K</u> ilo	S	<u>R</u> omeo- <u>A</u> lpha- <u>B</u> ravo
NNE	<u>J</u> uli <u>e</u> tt- <u>K</u> ilo- <u>L</u> ima	SSW	<u>A</u> lpha- <u>B</u> ravo- <u>C</u> harlie
NE	<u>K</u> ilo- <u>L</u> ima- <u>M</u> ike	SW	<u>B</u> ravo- <u>C</u> harlie- <u>D</u> elta
ENE	<u>L</u> ima- <u>M</u> ike- <u>N</u> ovember	WSW	<u>C</u> harlie- <u>D</u> elta- <u>E</u> cho
E	<u>M</u> ike- <u>N</u> ovember- <u>P</u> apa	W	<u>D</u> elta- <u>E</u> cho- <u>F</u> oxtrot
ESE	<u>N</u> ovember- <u>P</u> apa- <u>Q</u> uebec	WNW	<u>E</u> cho- <u>F</u> oxtrot- <u>G</u> olf
SE	<u>P</u> apa- <u>Q</u> uebec- <u>R</u> omeo	NW	<u>F</u> oxtrot- <u>G</u> olf- <u>H</u> otel
SSE	<u>Q</u> uebec- <u>R</u> omeo- <u>A</u> lpha	NNW	<u>G</u> olf- <u>H</u> otel- <u>J</u> uli <u>e</u> tt

NOTE: Affected Sectors and Zones are recorded using alphanumeric designations. Example: "The affected Sectors and Zones are Bravo 1 and 2, Charlie 1 and 2, and Delta 1 and 2."

8. DETERMINE AFFECTED ZONES:

a) Obtain from Station Emergency Manager

a) IF NOT known, assume Zones 1 and 2.b) Record affected Sectors and Zones in Item 8 of Attachment 1

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03 PAGE 6 of 16
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: During the initial stages of an emergency, prior to manning the Technical Support Center (TSC), the Radiological Assessment Director will be the senior H.P. member onsite, who will be located in the Control Room or H.P. office. After the TSC is manned, the Radiological Assessment Director will be located in the TSC.

9. INFORM RADIOLOGICAL ASSESSMENT DIRECTOR OF MET DATA:

a) Inform Radiological Assessment Director of:

- 1) Wind direction
- 2) Wind speed
- 3) Stability class

10. UPDATE STATUS BOARD:

a) IF status board is being maintained, insure following updated:

- 1) Wind direction
- 2) Wind speed
- 3) Stability class
- 4) Affected sectors

a) IF NOT, GO TO next step.

11. RECORD REMARKS:

a) Obtain from status board
 b) IF there are any remarks, record them in Item 9 of Attachment 1

a) Obtain from Station Emergency Manager.

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 7 of 16

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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12. RECORD YOUR NAME AND TITLE:

- a) Record in Item 10 of Attachment 1

13. OBTAIN APPROVAL TO TRANSMIT MESSAGE:

- a) Show completed Attachment 1 to Station Emergency Manager
- b) Receive approval to transmit

14. TRANSMIT MESSAGE TO STATE AND LOCAL GOVERNMENTS:

- a) Use Insta-Phone

a) IF NOT operable, use normal station telephone. Call following in order listed:

- _____ 1) Louisa County
9-967-1234
- _____ 2) Spotsylvania County
9-1-582-6384
- _____ 3) State of Virginia
9-1-804-323-2300
Ask for Duty Officer
- _____ 4) Caroline County
9-1-804-633-5400
- _____ 5) Orange County
9-1-672-1234
- _____ 6) Hanover County
9-1-804-798-3241

- b) Read Attachment 1 exactly as written

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 8 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

15. RECORD TIME MESSAGE SENT:
a) Record on bottom of Attachment 1
16. RETAIN ATTACHMENT:
a) Retain Attachment 1
17. INFORM STATION EMERGENCY MANAGER:
a) Inform Station Emergency Manager that message was sent
18. VERIFY RELEASE STATUS:
a) Item 6 of Attachment 1 indicates: a) IF NOT, GO TO Step 20.
Release-HAS OCCURRED
OR
Release-IS OCCURRING
OR
Release-IS PROJECTED
19. INFORM STATE THAT REPORT WILL BE SENT:
a) Use State EOC ring down phone a) IF NOT operable, use normal station telephone

AND
Call State EOC at
9-1-804-323-2300,

AND
Ask for Duty Officer.

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 9 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

19. (CONTINUED)

b) Read following message:

"This is VEPCO North Anna Control Room (or TSC). We will transmit a report of radiological conditions shortly."

c) GO TO Step 2120. INFORM STATE THAT REPORT WILL NOT BE SENT:

a) Use State EOC ring down phone

a) IF NOT operable, use normal station telephoneAND

Call State EOC at
9-1-804-323-2300,

AND

Ask for Duty Officer.

b) Read following message:

"This is VEPCO North Anna Control Room (or TSC). Since we have no release of radioactive material, we will not transmit a report of radiological conditions."

c) GO TO Step 37

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03 PAGE 10 of 16
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

21. OBTAIN RADIOLOGICAL REPORT FORM:

a) Attachment 2, Report of Radiological Conditions to the State, located at the back of this procedure

a) IF NOT attached to this procedure, obtain from procedure file.

NOTE: The initial report of radiological conditions must be transmitted to the state as soon as possible following the declaration of an emergency involving release of radioactive material.

Follow-up reports should be sent to the state approximately every 30 minutes or when there are changes in radiological conditions.

22. DETERMINE RELEASE DATA:

a) Obtain from status board

a) Obtain from Station Emergency Manager.

b) Record in Items 1 thru 4 of Attachment 2

23. DETERMINE STABILITY CLASS:

a) IF in Control Room, obtain from Met. Panel

a) IF NOT, contact Control Room and request data.

b) Read Delta T from "Main Tower Delta T" Recorder,

b) IF NOT operable, read Sigma Theta from "Backup Tower Sigma Theta" Recorder,

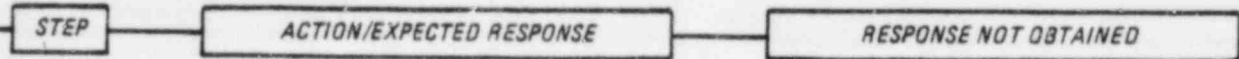
AND

Use Table 2 to determine stability class.

AND

Use Table 3 to determine stability class.

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 11 of 16



23. (CONTINUED)

TABLE 2

DELTA T (°F)		STABILITY CLASS	DELTA T (°F)		STABILITY CLASS
-2.0 to -1.4	=	A	-0.4 to +1.0	=	E
-1.4 to -1.2	=	B	+1.0 to +2.8	=	F
-1.2 to -1.1	=	C	+2.8 to +3.0	=	G
-1.1 to -0.4	=	D			

TABLE 3

SIGMA THETA (DEGREES)		STABILITY CLASS	SIGMA THETA (DEGREES)		STABILITY CLASS
45.0 to 22.5	=	A	7.5 to 3.8	=	E
22.5 to 17.5	=	B	3.8 to 2.1	=	F
17.5 to 12.5	=	C	2.1 to 0	=	G
12.5 to 7.5	=	D			

- c) Record stability class in Item 7 of Attachment 1
- d) Obtain wind direction, wind speed, and stability class from most recent Attachment 1 completed. Record in item 5 of Attachment 2

24. DETERMINE TEMPERATURE:

- a) IF in Control Room, obtain temperature from "Main Tower Temperature" Recorder.
- a) IF NOT, contact Control Room and request data.

<p>NUMBER EPIP-2.01</p>	<p>PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS</p>	<p>REVISION 03</p>
		<p>PAGE 12 of 16</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
24.	<p>(CONTINUED)</p> <p>b) Record temperature in <u>Item 6</u> of Attachment <u>2</u></p>	
25.	<p>DETERMINE PRECIPITATION:</p> <p>a) Determine <u>AND</u> record precipitation form in Item <u>6</u> of Attachment <u>2</u></p>	
26.	<p>INFORM RADIOLOGICAL ASSESSMENT DIRECTOR:</p> <p>a) Inform Radiological Assessment Director of temperature <u>AND</u> precipitation data</p>	
27.	<p>UPDATE STATUS BOARD:</p> <p>a) <u>IF</u> status board being maintained, insure temperature and precipitation data updated</p>	a) <u>IF NOT</u> , <u>GO TO</u> next step.
28.	<p>RECORD RADIOLOGICAL DATA:</p> <p>a) Obtain from status board</p> <p style="text-align: center;"><u>OR</u></p> <p>Radiological Assessment Director</p>	a) <u>IF NOT</u> known, record as "unknown".
29.	<p>RECORD RECOMMENDED OFFSITE PROTECTIVE ACTIONS:</p> <p>a) Obtain from status board</p> <p>b) Record in Items <u>7</u> through <u>14</u> of Attachment <u>2</u></p> <p>a) Obtain from status board</p> <p>b) Record in Item <u>15</u> of Attachment <u>2</u>.</p>	a) Obtain from Station Emergency Manager.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-2.01	NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	03
		PAGE
		13 of 16

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
30.	RECORD STATION CONDITIONS:	
	a) Obtain from status board	a) Obtain from Station Emergency Manager.
	b) Include status of following:	
	1) Fuel Failure	
	2) Containment Leakage	
	3) RCS Integrity	
	c) Record in Item <u>16</u> of Attachment <u>2</u>	
31.	RECORD YOUR NAME AND TITLE:	
	a) Record in Item <u>17</u> of Attachment <u>2</u>	
32.	OBTAIN APPROVAL TO TRANSMIT MESSAGE:	
	a) Show completed Attachment <u>2</u> to Station Emergency Manager	
	b) Receive approval to transmit	
33.	TRANSMIT MESSAGE TO STATE:	
	a) Use ringdown phone to state EOC	a) <u>IF NOT</u> operable, use normal station telephone
		<u>AND</u>
		Call state EOC at 9-1-804-323-2300,
		<u>AND</u>
		Ask for Duty Officer.
	b) Read Attachment <u>2</u> <u>exactly as written</u>	

NUMBER EPIP-2.01	PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS	REVISION 03
		PAGE 14 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

34. RECORD TIME MESSAGE SENT:
a) Record in Item 17 of Attachment 2.
35. RETAIN ATTACHMENT 2:
a) Retain Attachment 2
36. INFORM STATION EMERGENCY MANAGER:
a) Inform Station Emergency Manager that message was sent
37. VERIFY EMERGENCY STATUS:
a) Notification of termination of emergency - NOT SENT a) IF sent, GO TO Step 46.
38. RELIEF:
a) IF your relief arrives, perform following: a) IF NOT, GO TO Step 39.
1) Brief your relief on current status of emergency
2) Review last Attachments 1 and 2 completed
3) Transfer this procedure and all completed attachments to your relief
b) Record relief:
Relieved By: _____
Time: _____
Date: _____

<p>NUMBER</p>	<p>PROCEDURE TITLE</p>	<p>REVISION</p>
<p>EPIF-2.01</p>	<p>NOTIFICATION OF STATE AND LOCAL GOVERNMENTS</p>	<p>03</p> <hr/> <p>PAGE</p> <p>15 of 16</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

39. RELOCATION:

a) IF in TSC, GO TO Step 40

a) IF NOT in TSC, relocate to TSC when TSC is being manned

AND

Station Emergency Manager directs you to relocate to TSC.

40. DETERMINE EOF STATUS:

a) Emergency Operations Facility (EOF) - NOT MANNED

a) IF EOF manned

AND

EOF has assumed responsibility for notification of state and local governments, GO TO Step 41.

1) GO TO Step 45

41. ASSUME TSC PHONETALKER DUTIES:

- a) Man ringdown phone to EOF
- b) Maintain Emergency Status Board and Radiological Status Board

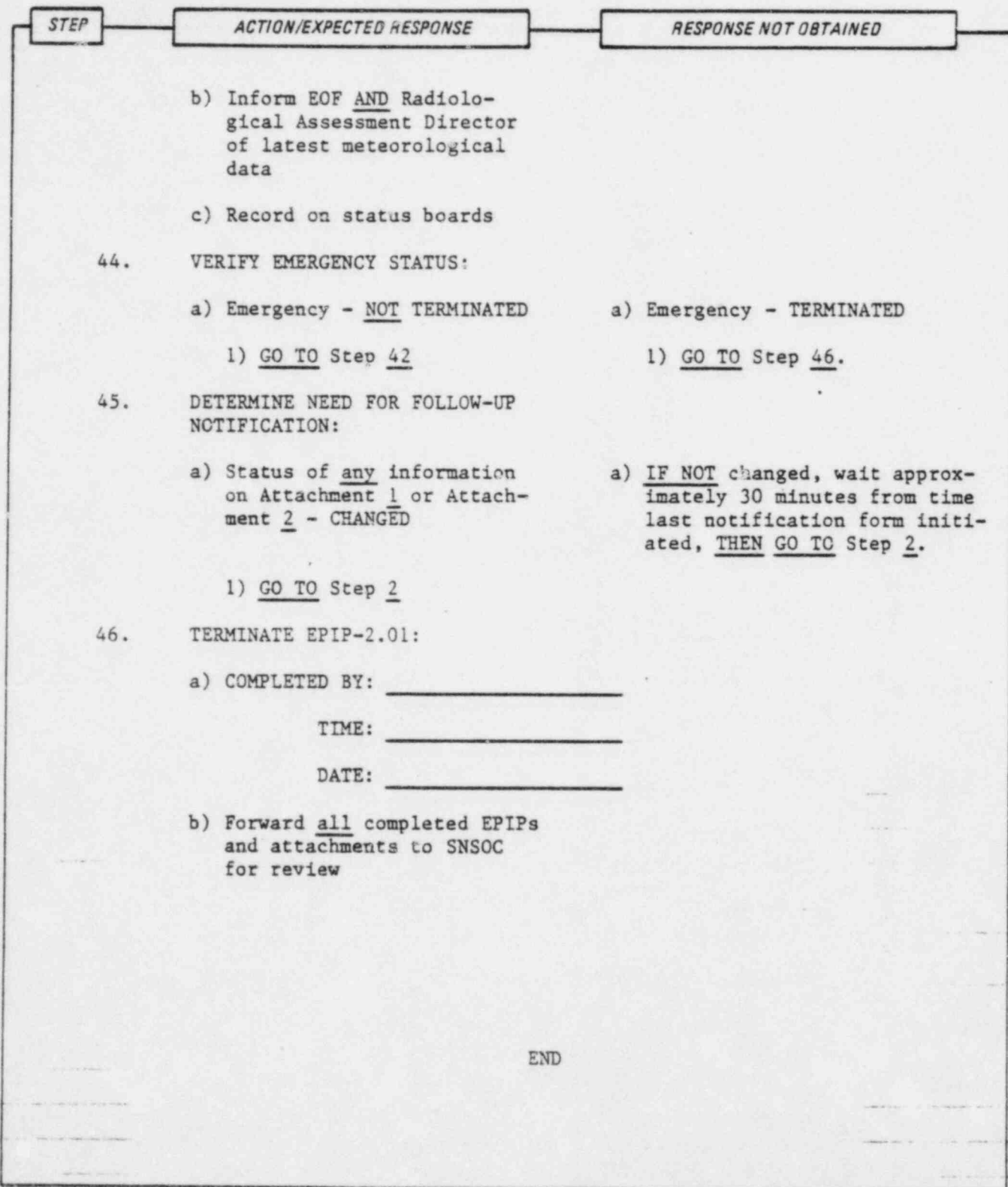
42. MAINTAIN EOF COMMUNICATIONS:

a) Keep EOF updated on emergency status

43. OBTAIN METEOROLOGICAL DATA:

a) Approximately every 15 minutes, request update of meteorological data from the Control Room phonetalker

<p>NUMBER EPIP-2.01</p>	<p>PROCEDURE TITLE NOTIFICATION OF STATE AND LOCAL GOVERNMENTS</p>	<p>REVISION 03</p>
		<p>PAGE 16 of 16</p>



NUMBER EPIP-2.01	ATTACHMENT TITLE REPORT OF EMERGENCY TO STATE AND LOCAL GOVERNMENTS	REVISION 03
ATTACHMENT 1		PAGE 1 of 1

MESSAGE:

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

- Louisa County Virginia State EOC Orange County
 Spotsylvania County Hanover County Caroline County

The emergency message is as follows:

Item 1. Emergency class: Notification of Unusual Event
 Alert Declared at _____ on ____/____/____
 Site Emergency (24 hr. time)
 General Emergency
 Emergency terminated (if checked, go to Item 9)

Item 2. Assistance requested: None
 _____ (no.) Fire Units from _____
 _____ (no.) Police Units from _____
 _____ (no.) Rescue Units from _____
 (Other) _____

Item 3. Emergency response actions underway: None
 Station monitoring terms dispatched offsite
 Station emergency personnel called in
 (Other) _____

Item 4. Evacuation of onsite personnel: No
 Yes, Evacuated to _____

Item 5. Prognosis of situation: Improving
 Worsening
 Stable
 (Other) _____

Item 6. Release of radioactive material: Has NOT occurred and is NOT projected
 Has occurred and is now terminated
 is presently occurring
 is projected to occur

Item 7. Wind direction is from the _____; Wind speed is _____ MPH.
 Stability class is _____

Item 8. Areas affected are None
 Sectors and Zones _____

Item 9. Remarks: _____

Item 10. This is _____ / _____
(name) (position)

Please acknowledge receipt of this message (Conduct roll-call and check boxes)

- Louisa County Virginia State EOC Orange County
 Spotsylvania County Hanover County Caroline County

This is VEPCO North Anna Control Room TSC EOF out at time _____
(24 hr. time)

NUMBER EPIP-2.01	ATTACHMENT TITLE REPORT OF RADIOLOGICAL CONDITIONS TO THE STATE	REVISION 03
ATTACHMENT 2		PAGE 1 of 1

This is VEPCO North Anna Control Room TSC EOF. I have a report of radiological conditions. Use a Report of Radiological Conditions form to copy this message. Please inform me when your are ready to copy. (Proceed when informed).

Item 1. Type of release is airborne, released at elevation of _____ ft. waterborne.
 surface spill.

Item 2. Release began at _____ (24 hr. time) is estimated to begin at _____ (24 hr. time)

Item 3. Release duration was _____ hrs. is estimated to be _____ hrs.

Item 4. Time between reactor shutdown and time of beginning of release was _____ hrs.
 is not applicable.

Item 5. Wind direction is from the _____. Wind speed is _____ MPH. Stability class is _____.

Item 6. Temperature is _____ °F. Precipitation form is None Rain Sleet
 Snow (Other) _____.

Item 7. The Iodine/Noble Gas Ratio is _____. unknown.

Item 8. Projected total release equivalent Curies of I-131 is _____ Curies.
 unknown.

Item 9. Projected total release equivalent Curies of Xe-133 is _____ Curies.
 unknown.

Item 10. Actual dose rate at the site boundary is _____ mR/hr. unknown.

Item 11. Estimated dose rates are _____ mR/hr at site boundary,
 _____ mR/hr at 2 miles, unknown
 _____ mR/hr at 5 miles, and
 _____ mR/hr at 10 miles

Item 12. Projected total integrated Whole Body dose is _____ mR at site boundary,
 _____ mR at 2 miles, unknown
 _____ mR at 5 miles, and _____ mR at 10 miles

Item 13. Projected total integrated Thyroid dose is _____ mR at site boundary,
 _____ mR at 2 miles, unknown
 _____ mR at 5 miles, and _____ mR at 10 miles

Item 14. Actual surface radioactive contamination is _____ DPM/100cm² in Zone _____,
 unknown

Item 15. Recommended offsite protective actions:
 None _____
 Sheltering in sectors and zones _____
 Evacuation of sectors and zones _____
 Other _____

Item 16. Station conditions are as follows: (Give brief status and cause of emergency. Use back if needed).

Item 17. This is _____ / _____ out at time _____
 (name) (position)

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-3.01	CALLOUT OF EMERGENCY RESPONSE PERSONNEL (With No Attachments)	02
		PAGE 1 of 3

PURPOSE

1. To callout station AND corporate emergency response personnel if they are not already at their normal work locations.

USER

Security Team Leader

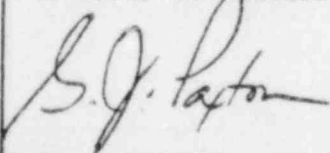
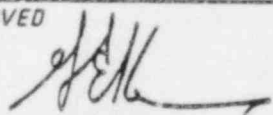
ENTRY CONDITIONS

1. Initiation directed by the Station Emergency Manager.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

APPROVED

 CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE
DATE

05-24-83

NUMBER EPIP-3.01	PROCEDURE TITLE CALLOUT OF EMERGENCY RESPONSE PERSONNEL (WITH NO ATTACHMENTS)	REVISION 02
		PAGE 2 of 3

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE: a) Initiated By: _____ Time: _____ Date: _____	
2.	OBTAIN EMERGENCY PERSONNEL NOTIFICATION LIST: a) Section 1.2 of the <u>North Anna Power Station Telephone Directory</u>	
3.	NOTIFY EMERGENCY RESPONSE PERSONNEL: a) Use all available telephones and Security personnel <u>AND</u> make notifications as rapidly as possible b) Call, in order, the individuals listed in the <u>Emergency Notifi- cation List</u> until at least one individual in each department is reached c) Call following departments in order listed: ___ General Office Security ___ Assistant Station Manager ___ Health Physics Department ___ Operations Department ___ Technical Services Dept.	

NUMBER EPIP-3.01	PROCEDURE TITLE CALLOUT OF EMERGENCY RESPONSE PERSONNEL (WITH NO ATTACHMENTS)	REVISION 02 PAGE 3 of 3
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3. (CONTINUED)

- ___ Maintenance Department
- ___ Security Department
- ___ Administrative Services Dept.
- ___ Training Department
- ___ Quality Control Department
- ___ NRC Resident Inspector

d) Read messages exactly as written in Section 1.2 of the North Anna Power Station Telephone Directory to each individual contacted

4. RECORD TIME CALLOUT COMPLETED:

a) Callout of above departments completed at time _____

5. INFORM STATION EMERGENCY MANAGER:

a) Inform Station Emergency Manager that callout completed

6. TERMINATE EPIP-3.01:

a) Completed By: _____

Time: _____

Date: _____

b) Forward EPIP-3.01 to SNSOC for review

END

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

<i>NUMBER</i>	<i>PROCEDURE TITLE</i>	<i>REVISION</i>
EPIP-3.02	ACTIVATION OF TECHNICAL SUPPORT CENTER (With 10 Attachments)	03
		<i>PAGE</i> 1 of 6

PURPOSE

1. To provide guidance to personnel charged with TSC Activation;

AND

2. To provide guidance to TSC members.

USER

Station Emergency Manager AND TSC personnel

ENTRY CONDITIONS

1. Declaration of Alert, Site Emergency or General Emergency;

AND

2. Entry from another EPIP;

OR

3. Direction of Station Emergency Manager.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 03-09-83
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<i>APPROVAL RECOMMENDED</i> 	<i>APPROVED</i>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<i>DATE</i> 05-24-83
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NUMBER EPIP-3.02	PROCEDURE TITLE ACTIVATION OF TECHNICAL SUPPORT CENTER (WITH 10 ATTACHMENTS)	REVISION 03
		PAGE 2 of 6

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: During normal hours of business, activation of the TSC is the responsibility of the Emergency Administrative Director or his alternate. If callout of emergency response personnel is required, the first person to report to the TSC should implement this procedure.

1. INITIATE PROCEDURE:

- a) Initiated By: _____
Date: _____
Time: _____

2. ACCOUNTABILITY

- a) Log TSC personnel on Attachment 1 as they arrive
b) Maintain accountability
c) Notify Station Security of personnel in TSC

NOTE: To switch between Unit 1 and Unit 2 first take the typers - OFF LINE.

3. TYPER SET UP:

- a) On alarm modem insure:
1) Ready LED-GREEN
2) Carrier LED-RED

NUMBER EPIP-3.02	PROCEDURE TITLE ACTIVATION OF TECHNICAL SUPPORT CENTER (WITH 10 ATTACHMENTS)	REVISION 03 PAGE 3 of 6
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	(CONTINUED)	
	b) On utility modem insure:	b) Check powerswitch at rear of set.
	1) Power LED-ON	
	2) Carrier LED-ON	
	c) On typer insure online/ offline button - <u>NOT</u> depressed	
	d) Select Unit 1 <u>OR</u> Unit 2 on switch box	
	e) Place typer power switch - ON	
	f) On typer side keyboard perform the following in order	
	1) [ESC]	
	2) [9]	
	3) [3]	
	4) [HI]	
	g) To verify typer programmed perform the following:	
	1) [ESC]	
	2) HOLD [BRK]	
	<u>SIMULTANEOUSLY</u>	
	PUSH [1]	
	3) Verify - BPYALF	<u>IF NOT</u> , perform following
	a) Depress OFF LINE button to ON LINE position.	a) [ESC] b) [9]

NUMBER EPIP-3.02	PROCEDURE TITLE ACTIVATION OF TECHNICAL SUPPORT CENTER (WITH 10 ATTACHMENTS)	REVISION 03
		PAGE 4 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	(CONTINUED)	c) [9] d) [HI] e) <u>GO TO</u> Step <u>3.f</u> f) Depress Offline Button to Online position. g) Verify all other front panel buttons - <u>NOT</u> depressed.
4.	HEAD PHONES: a) Locate two (2) telephone head phones in closet outside Emergency Operations Director's Office b) Connect to jacks on either side of Plant Status Board	
5.	COMMUNICATION: a) <u>IF</u> desired, and personnel available, establish communication to Control Room via TSC-Control Rm. ringdown phone b) <u>IF</u> desired, and personnel available, establish communications to OSC via PBX phone c) Refer to <u>Attachment 10</u> for Emergency Facility Phone Numbers.	a) <u>IF NOT</u> , <u>GO TO</u> Step <u>5.b</u> b) <u>IF NOT</u> , <u>GO TO</u> Step <u>6</u>

NUMBER EPIP-3.02	PROCEDURE TITLE ACTIVATION OF TECHNICAL SUPPORT CENTER (WITH 10 ATTACHMENTS)	REVISION 03
		PAGE 5 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6.	CHECKLISTS:	
	a) As each Emergency Manager/ Director <u>OR</u> alternate arrives in TSC distribute appropriate attachment 1) <u>Station Emergency</u> <u>Manager Guideline,</u> <u>Attachment 2, 10</u> 2) <u>Emergency Operations</u> <u>Director Guideline,</u> <u>Attachment 3, 10</u> 3) <u>Emergency Technical</u> <u>Director Guideline,</u> <u>Attachment 4, 10</u> 4) <u>Emergency Administrative</u> <u>Director Guideline,</u> <u>Attachment 5, 10</u> 5) <u>Emergency Maintenance</u> <u>Director Guideline,</u> <u>Attachment 6, 10</u> 6) <u>Radiological Assessment</u> <u>Director Guideline,</u> <u>Attachment 7, 10</u> 7) <u>Emergency Communicator</u> <u>Guideline, Attachment 8,</u> <u>10</u> 8) <u>Emergency Procedures</u> <u>Coordinator Guideline,</u> <u>Attachment 9, 10</u>	

<p>NUMBER EPIP-3.02</p>	<p>PROCEDURE TITLE ACTIVATION OF TECHNICAL SUPPORT CENTER (WITH 10 ATTACHMENTS)</p>	<p>REVISION 03</p>
		<p>PAGE 6 of 6</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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7. VERIFY ACTIVATION:

a) Required TSC personnel
in place

a) IF required, call out addi-
tion personnel. GO TO Step
6.

8. TERMINATION

a) TSC deactivated by Station
Emergency Manager

a) DO NOT terminate until
deactivation complete.

b) Close-out

1) COMPLETED BY: _____

DATE: _____

TIME: _____

c) Verify Completion of all
Attachments

d) Forward EPIP-3.02 and all nine
(9) attachments to SNSOC for
review

END

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE TECHNICAL SUPPORT CENTER MANNING</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>		<p>PAGE 1 of 2</p>

NOTE: Log personnel as they arrive and leave for accountability purposes.

<u>EMERGENCY POSITION</u>	<u>PRINCIPLE</u>	<u>ALTERNATE</u>
Station Emergency Manager	_____	_____
Emergency Operations Director	_____	_____
Emergency Technical Director	_____	_____
Emergency Maintenance Director	_____	_____
Emergency Administrative Director	_____	_____
Radiological Assessment Director	_____	_____
Emergency Communicator	_____	_____
Emergency Procedures Coordinator	_____	_____

ADDITIONAL PERSONNEL

<u>Maintenance Support Team</u>	<u>Administrative Support Team</u>
_____	_____
_____	_____
_____	_____
_____	_____

<u>Technical Support Team</u>	<u>Radiological Assessment Team</u>
_____	_____
_____	_____
_____	_____
_____	_____

<i>NUMBER</i> EPIP-3.02	<i>ATTACHMENT TITLE</i> TECHNICAL SUPPORT CENTER MANNING	<i>REVISION</i> 03
<i>ATTACHMENT</i> 1		<i>PAGE</i> 2 of 2

Miscellaneous Personnel

_____	_____
_____	_____
_____	_____
_____	_____

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE STATION EMERGENCY MANAGER GUIDELINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 1 of 5</p>

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
<p><u>NOTE:</u> This Attachment may be implemented by an alternate individual if Station Emergency Manager position is <u>NOT</u> located in TSC.</p>		
<p>1.</p>	<p>INITIATE EPIP-3.02, ATTACHMENT 2:</p> <p>a) BY: _____</p> <p>DATE: _____</p> <p>TIME: _____</p>	
<p>2.</p>	<p>EMERGENCY ORGANIZATION:</p> <p>a) Verify response personnel present or enroute:</p> <p>1) Emergency Operations Director</p> <p>2) Emergency Maintenance Director</p> <p>3) Emergency Technical Director</p> <p>4) Emergency Administrative Director</p> <p>5) Radiological Assesement Director</p> <p>6) Emergency Procedures Director</p> <p>7) Emergency Communicator</p> <p>8) OSC Director (at OSC)</p>	

NUMBER EPIP-3.02	ATTACHMENT TITLE STATION EMERGENCY MANAGER GUIDELINE	REVISION 03
ATTACHMENT 2		PAGE 2 of 5

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

NOTE: Certain decisions are the sole responsibility of the Station Emergency Manager and the authority to make these decisions shall NOT be delegated.

3. AUTHORITY:

- a) The following decisions shall NOT be delegated:
- 1) Clasification of emergency
 - 2) Notification of offsite agencies.
 - 3) Recommendation of offsite protective measures
 - 4) Discontinuance of onsite activities
 - 5) Initiation of site evacuation
 - 6) Restriction of site access
 - 7) Authorization of emergency exposure limits
 - 8) Contact of VEPCO management

4. OSC:

- a) Verify resources with OSC Director
- 1) Fire Brigade
 - 2) First Aid Team

NUMBER EPIP-3.02	ATTACHMENT TITLE STATION EMERGENCY MANAGER GUIDELINE	REVISION 03
ATTACHMENT 2		PAGE 3 of 5

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
4.	(CONTINUED)	
	3) Damage Control Team	
	4) Search and Rescue Team	
	5) Standby Operations personnel	
5.	COMMUNICATION:	
	a) Assure timely notifi- cation of offsite authorities	
<p><u>NOTE:</u> Actions of procedures may be modified, during emergency conditions, only at the discretion of the Station Emergency Manager.</p>		
6.	DIRECTION:	
	a) Assure direction of the emergency is conducted IAW EPIP-1.01, <u>Emergency Manager Controlling Procedure</u>	
	b) Assure development of and approve additional temporary procedures as required	
7.	RELIEF:	
	a) Assure suitable arrangements for timely relief of emergency response personnel through Emergency Directors	

NUMBER EPIP-3.02	ATTACHMENT TITLE STATION EMERGENCY MANAGER GUIDELINE	REVISION 03
ATTACHMENT 2		PAGE 4 of 5

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

7. (CONTINUED)

- 1) Emergency Operations
Director
 - Operations personnel
 - OSC Director

- 2) Emergency Technical
Director
 - Technical Support Team
 - Chemistry Team

 - STAs

- 3) Emergency Maintenance
Director
 - Maintenance Support Team
 - Mechanical and Electrical
members of Damage Control
Team
 - Inst. Technician Members of
Damage Control Team

- 4) Emergency Administrative
Director
 - Emergency Procedures
Coordinator
 - Emergency Communicator
 - Administrative Support
Team
 - Fire Brigade
 - First Aid Team
 - Security Team
 - Search and Rescue Team

- 5) Radiological Assessment
Director
 - Radiation Protection
Supervisor

NUMBER EPIP-3.02	ATTACHMENT TITLE STATION EMERGENCY MANAGER GUIDELINE	REVISION 03
ATTACHMENT 2		PAGE 5 of 5

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

7. (CONTINUED)

5) (CONTINUED)

- In Plant Monitoring Team
- Sample Analysis Team
- Personnel Monitoring and Decon Team
- Onsite Monitoring Team
- Dose Assessment Team
- Offsite Monitoring Teams
- Evacuation Monitoring Teams

8. TERMINATE ATTACHMENT 2:

a) Verify TSC -
DEACTIVATED

a) IF NOT, return to previous steps of this Attachment 2 for reference as required.

b) Close-out

1) COMPLETED BY: _____

DATE: _____

TIME: _____

c) Affix this Attachment 2
to EPIP-3.02

END

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY OPERATIONS DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 3		PAGE 1 of 3

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

1. INITIATE EPIP-3.02, ATTACHMENT 3:

- a) BY: _____
 DATE: _____
 TIME: _____

2. COMMUNICATIONS:

- | | |
|--|---|
| <p>a) Obtain Control Room Operator Trainee from OSC to act as TSC-Control Room phonetalker</p> <p>b) Have phonetalker establish communications with Control Room using TSC-Control Room ring down telephone</p> <p>c) Have phonetalker maintain Plant Status Board</p> <p>d) Update Station Emergency Manager in a timely manner</p> | <p>a) Obtain Nuclear Training Coordinator from Administrative Support Team</p> <p>b) <u>IF NOT</u> operable use any other system operable</p> |
|--|---|

3. OPERATIONAL STATUS:

- a) As required, obtain operational status from Control Room personnel

4. SUPPORT:

- a) Verify availability of operations personnel in OSC
- b) As required, request additional personnel to support operational activities
- c) As required, request material AND equipment via Emergency Administrative Director

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY OPERATIONS DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 3		PAGE 2 of 3

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
5.	DIRECTION: a) As required, advise <u>OR</u> direct Control Room Personnel in the mitigation of operational events b) As required, provide status change information and operational recommendations to the Station Emergency Manager c) Assure proper usage of station procedures by Operations personnel d) Evaluate safety status of any unaffected units e) Assist in the development of any temporary procedures required for conducting emergency actions	
6.	RELIEF: a) Assure suitable arrangements for relief of: 1) OSC Director and Operations personnel in OSC 2) Control Room personnel 3) Emergency Operations Director	
7.	TERMINATE ATTACHMENT 3: a) Verify TSC - DEACTIVATED	a) <u>IF NOT</u> , return to previous steps of this attachment 3 for reference as required.

<i>NUMBER</i> EPIP-3.02	<i>ATTACHMENT TITLE</i> EMERGENCY OPERATIONS DIRECTOR GUIDELINE	<i>REVISION</i> 03
<i>ATTACHMENT</i> 3		<i>PAGE</i> 3 of 3

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

7. (CONTINUED)

b) Close-out

1) COMPLETED BY: _____

DATE: _____

TIME: _____

c) Affix this Attachment 3
to EPIP-3.02

END

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE EMERGENCY TECHNICAL DIRECTOR GUIDELINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>		<p>PAGE 1 of 3</p>

STEP	* ACTION/EXPECTED RESPONSE	*	RESPONSE NOT OBTAINED
1.	INITIATE EPIP-3.02, ATTACHMENT 4:		
	a) BY: _____		
	DATE: _____		
	TIME: _____		
2.	ORGANIZATION:		
	a) Verify Technical Support Team:		*Obtain necessary personnel
	1) Engineering Supervisor		
	2) STA		
	3) Reactor Engineer		
	4) Engineer (Mechanical)		
	5) Engineer (Electrical)		
	b) Verify Chemistry Team		
3.	ACTIVITIES:		
	a) Direct the activities of the following:		
	1) Technical Support Team		
	2) Chemistry Team		

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY TECHNICAL DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 4		PAGE 2 of 3

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

4. ENGINEERING ANALYSIS:
- a) Analyze and aid in development of solutions to problems in the following areas of expertise:
- 1) Engineering
 - 2) Reactor Physics
 - 3) Instrumentation and Control
 - 4) Chemistry
5. SUPPORT:
- a) Provide technical support to the Station Emergency Manager
6. PROCEDURES:
- a) Assist in the development of any temporary procedures required for conducting emergency actions
7. NRC INTERFACE:
- a) Interface with NRC and aid in resolution of questions concerning license requirements
8. RELIEF:
- a) Assure suitable arrangements for relief of:
- 1) Technical Support Team

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE EMERGENCY TECHNICAL DIRECTOR GUIDELINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>		<p>PAGE 3 of 3</p>

STEP * ACTION/EXPECTED RESPONSE

*RESPONSE NOT OBTAINED

8. (CONTINUED)

- 2) Chemistry Team
- 3) STAs
- 4) Emergency Technical Director

9. TERMINATE ATTACHMENT 4:

a) Verify TSC -
DE-ACTIVATED

a) IF NOT, return to
previous steps of this
Attachment 4 for refer-
ence as required.

b) Close-out

1) COMPLETED BY: _____

DATE: _____

TIME: _____

c) Affix this Attachment 4
to EPIP-3.02

END

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY ADMINISTRATIVE DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 5		PAGE 1 of 5

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
1.	INITIATE EPIP-3.02, ATTACHMENT 5: a) BY: _____ DATE: _____ TIME: _____	
2.	ORGANIZATION a) Verify Administrative Support Team 1) Security Supervisor 2) QC Supervisor <u>OR</u> Engineer 3) Nuclear Training Coordinator 4) Fire Marshal 5) Clerks b) Verify Security Team 1) Security Shift Supervisor 2) Security Officers 3) Security Control System Operator 4) Administrative Security Officers	*Obtain necessary personnel.
3.	VERIFY TSC: a) <u>IF</u> required, assist in logistics of TSC activation	

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY ADMINISTRATIVE DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 5		PAGE 2 of 5

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

4. INTERFACE:

- a) Advise Station Emergency Manager on emergency fire protection, security, administration and logistical support
- b) Verify Emergency Communicator-LAW EPIP-3.02, Attachment 7
- c) Verify Emergency Procedures Coordinator LAW EPIP-3.02, Attachment 6

5. DIRECTION:

- a) Provide clerical and records support
- b) Assure TSC accountability LAW EPIP-3.02
- c) Direct Security Team on the following:
 - 1) Personnel accountability
 - 2) Access control
 - 3) Station security
 - 4) EOF actuation
 - 5) Maintain liaison with local law enforcement agencies
- d) Provide QA review of procedures

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY ADMINISTRATIVE DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 5		PAGE 3 of 5

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

6. PROCEDURES:

- a) Assist in the development and review of any temporary procedures required for conducting emergency actions

7. COORDINATION:

- a) Coordinate acquisition of equipment, supplies, and personnel:
 - 1) Onsite availability
 - 2) Offsite thru EOF
- b) Record on Resource Request (Attachment 5, Page 5 of 5)
- c) Assure timely follow up on logistical items

8. RELIEF:

- a) Assure suitable arrangements for relief of:
 - 1) Administrative Support Team
 - 2) Security Support Team
 - 3) Emergency Communicator
 - 4) Emergency Procedures Coordinator
 - 5) Emergency Administrative Director

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE EMERGENCY ADMINISTRATIVE DIRECTOR GUIDELINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 5</p>		<p>PAGE 4 of 5</p>

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
9.	TERMINATE ATTACHMENT 5	
	a) Verify TSC - DEACTIVATED	a) <u>IF NOT</u> , return to pre- vious steps of this Attach- ment 5 for reference as required.
	b) Close-out	
	1) COMPLETED BY: _____	
	DATE: _____	
	TIME: _____	
	c) Affix this Attachment <u>5</u> to EPIP-3.02	
	END	

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY MAINTENANCE DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 6		PAGE 1 of 3

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
1.	INITIATE EPIP-3.02, ATTACHMENT 6:	
	a) BY: _____	
	DATE: _____	
	TIME: _____	
2.	VERIFY ORGANIZATION:	
	a) Maintenance Support Team	*Obtain necessary personnel.
	1) Supervisor Maintenance Services	
	2) Mechanical Supervisor	
	3) Stores Supervisor/ Storekeeper	
	4) Electrical Supervisor	
	b) Verify availability of Maintenance personnel in OSC	
	c) Verify instrument personnel in OSC	
3.	ACTIVITIES:	
	a) Direct activities of:	
	1) Maintenance Support Team	
	2) Damage Control Team(s)	
4.	SUPPORT:	
	a) Provide Maintenance Support to Station Emergency Manager	
	b) Provide timely updates on damage control activities	

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY MAINTENANCE DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 6		PAGE 2 of 3

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
5.	INTERFACE: a) Coordinate activities with other departments via Emergency Directors b) Coordinate acquisition of equipment, supplies and personnel through the Emergency Administrative Director c) Assure timely follow up	
6.	PROCEDURES: a) Assist in the development and review of any temporary procedures required for conducting emergency actions	
7.	RELIEF: a) Assure suitable arrangements for relief of: 1) Emergency Support Team 2) Damage Control Team(s) 3) Maintenance members of Damage Control Team(s) 4) Instrumentation members of Damage Control Room 5) Emergency Maintenance Director	
8.	TERMINATE ATTACHMENT 6: a) Verify TSC - DEACTIVATED	a) <u>IF NOT</u> , return to previous steps of this Attachment 6 for reference as required.

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE EMERGENCY MAINTENANCE DIRECTOR GUIDELINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 6</p>		<p>PAGE 3 of 3</p>

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

8. (CONTINUED)

b) Close out

1) Completed By: _____

Date: _____

Time: _____

c) Affix this Attachment 6 to
EPIP-3.02

END

NUMBER EPIP-3.02	ATTACHMENT TITLE RADIOLOGICAL ASSESSMENT DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 7		PAGE 1 of 4

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

1. INITIATE EPIP-3.02, ATTACHMENT 7:
 - a) BY: _____
 - DATE: _____
 - TIME: _____

2. VERIFY EPIP-4.01:
 - a) EPIP-4.01 - INITIATED
 - a) IF NOT, initiate EPIP-4.01.

3. VERIFY ORGANIZATION:
 - a) Radiological Assessment Team * Obtain necessary personnel.
 - 1) Health Physicist
 - 2) Health Physics Technicians
 - b) Offsite Monitoring Teams (2)
 - c) Radiation Protection Personnel
 - 1) Inplant Monitoring Team
 - 2) Sample Analysis Team
 - 3) Onsite Monitoring Team

4. INTERFACE:
 - a) Coordinate activities with other departments via Emergency Directors
 - b) Obtain required equipment and supplies via Emergency Administrative Director

NUMBER EPIP-3.02	ATTACHMENT TITLE RADIOLOGICAL ASSESSMENT DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 7		PAGE 2 of 4

STEP	* ACTION/EXPECTED RESPONSE	*	RESPONSE NOT OBTAINED
5.	DIRECTION: a) Direct activities of the following 1) Radiological Protection Supervisor 2) Dose Assessment Team b) Until EOF manned direct following 1) Offsite Monitoring Teams 2) Evacuation Monitoring Teams c) When EOF manned direct Dose Assessment Team Leader to report to Radiological Assessment Coordinator		
6.	CHECK RELEASES: a) Obtain status of releases from process monitors where possible b) Evaluate offsite dose assessment information		
7.	SUPPORT: a) Provide radiological advice to Station Emergency Director b) Evaluate emergency exposure criteria c) Provide timely updates on radiological conditions		

NUMBER EPIP-3.02	ATTACHMENT TITLE RADIOLOGICAL ASSESSMENT DIRECTOR GUIDELINE	REVISION 03
ATTACHMENT 7		PAGE 3 of 4

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
8.	PROTECTIVE MEASURES: a) Evaluate radiological conditions and make recommendations for onsite and offsite protective actions to Station Emergency Manager	
9.	DAMAGE CONTROL: a) Provide RWPs required for damage control activities	
10.	PROCEDURES: a) Assist in the development of any temporary procedures required for conducting emergency actions	
11.	RELIEF: a) Assure suitable arrangements for relief of: <ol style="list-style-type: none"> 1) Dose Assessment Teams 2) Offsite Monitoring Teams (2) 3) Radiation Protection Personnel 4) Radiological Assessment Director 	

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE RADIOLOGICAL ASSESSMENT DIRECTOR GUIDELINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 7</p>		<p>PAGE 4 of 4</p>

STEP	* ACTION/EXPECTED RESPONSE	*	RESPONSE NOT OBTAINED
12.	TERMINATE ATTACHMENT 7:		
	a) Verify TSC - DEACTIVATED		a) <u>IF NOT</u> , As required, return to previous steps of this Attachment 7 for reference as required
	b) Close out		
	1) Completed By: _____		
	Date: _____		
	Time: _____		
	c) Affix this Attachment 7 to EPIP-3.02		

END

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY COMMUNICATOR GUIDELINE	REVISION 03
ATTACHMENT 8		PAGE 1 of 2

STEP	* ACTION/EXPECTED RESPONSE	* RESPONSE NOT OBTAINED
1.	INITIATE EPIP-3.02, ATTACHMENT 8: a) BY: _____ DATE: _____ TIME: _____	
	<u>NOTE:</u> Emergency Communicator position moves with that of the Station Emergency Manager.	
2.	VERIFY EOF: a) EOF - <u>NOT</u> ACTIVITATED	a) <u>IF</u> ACTIVATED, transmit messages from TSC/Control Room to EOF. <u>AND</u> <u>GO TO</u> Step <u>5</u> of Attachment <u>8</u> .
	<u>NOTE:</u> Updates to state and local governments should be made at approximately 15 minutes intervals and after significant changes of plant status, radiological data, or meteorological data.	
3.	STATE AND COUNTY NOTIFICATION: a) Under direction of the Station Emergency Manager, transmit messages IAW EPIP-2.01, <u>Notification of State and Local Governments</u>	

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY COMMUNICATOR GUIDELINE	REVISION 03
ATTACHMENT 8		PAGE 2 of 2

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

4. NRC NOTIFICATION:

- a) Under direction of the Station Emergency Manager, transmit messages IAW EPIP-2.02, Notification of NRC

5. VERIFY TSC:

- a) IF TSC manned maintain the Radiological Status Board
 b) Update Status Board Data at 15 minute intervals

6. TERMINATE ATTACHMENT 8:

- a) Verify TSC - DEACTIVATED a) GO TO Step 2 of Attachment 8.
 b) Close out

1) Completed By: _____

Date: _____

Time: _____

- c) Affix this Attachment 8 to EPIP-3.02

END

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY PROCEDURE COORDINATOR GUIDELINE	REVISION 03
ATTACHMENT 9		PAGE 1 of 2

STEP * ACTION/EXPECTED RESPONSE * RESPONSE NOT OBTAINED

1. INITIATE EPIP-3.02, ATTACHMENT 9:
 - a) BY: _____
 - DATE: _____
 - TIME: _____

2. CONTROLLING PROCEDURES:
 - a) Assist Station Emergency Manager in maintenance of controlling procedures
 - b) Assure appropriate procedures are initiated as required
 - c) Track and hold completed procedures until TSC deactivation

3. LOGISTICS:
 - a) Verify sufficient EPIPs and attachments available in TSC
 - b) Procure additional material via Emergency Administrative Director

4. TERMINATION OF ATTACHMENT 9:
 - a) Verify TSC - DEACTIVATED
 - a) IF NOT, return to previous step of this Attachment 9 for reference as required.
 - b) Assist the Station Emergency Manager in collection of all procedures used during the emergency

<p>NUMBER EPIP-3.02</p>	<p>ATTACHMENT TITLE EMERGENCY PROCEDURE COORDINATOR GUIDELINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 9</p>		<p>PAGE 2 of 2</p>

STEP	* ACTION/EXPECTED RESPONSE	*	RESPONSE NOT OBTAINED
4.	(CONTINUED)		
	c) Verify appropriate signatures on procedure and attachments		
	d) Verify procedures properly completed		
	e) Close out		
	1) Completed By: _____		
	Date: _____		
	Time: _____		
	f) Affix this Attachment 9 to EPIP-3.02		

NUMBER EPIP-3.02	ATTACHMENT TITLE EMERGENCY FACILITY PHONE NUMBERS	REVISION 03
ATTACHMENT 10		PAGE 1 of 1

Emergency Work Area:CONTROL ROOMPBX NUMBER:

Unit No. 1 Control Room Operator	2512
Unit No. 1 Shift Supervisor	2511
Unit No. 2 Control Room Operator	2522
Unit No. 2 Shift Supervisor	2521

TECHNICAL SUPPORT CENTER

Station Emergency Manager	2914
Health Physics	2252
Technical Services	2263
Operations	2301
Maintenance	2254
NRC	2316

OPERATIONAL SUPPORT CENTER

Primary OSC	2746
Alternate OSC	2797

EMERGENCY OPERATIONS FACILITY

Recovery Manager	2166
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SECURITY

Secondary Alarm Station (SAS)	2221
Central Alarm Station (CAS)	2249
Shift Supervisor	2224

OTHER VEPCO NUMBERS

Vepco Information (Visitor) Center	2919
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VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER</p> <p>EPIP-3.03</p>	<p>PROCEDURE TITLE</p> <p>ACTIVATION OF OPERATIONAL SUPPORT CENTER (WITH 3 ATTACHMENTS)</p>	<p>REVISION</p> <p>04</p>
		<p>PAGE</p> <p>1 of 4</p>

PURPOSE

1. To provide guidance to personnel charged with activation of the OSC.

USER

Operational Support Center Director

ENTRY CONDITIONS

1. Declaration of an Alert, Site Emergency or General Emergency;

AND

2. Entry from other EIPs;

OR

3. Direction of the Station Emergency Manager.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 03-09-83
REV. 04	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
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<p>NUMBER EPIP-3.03</p>	<p>PROCEDURE TITLE ACTIVATION OF OPERATIONAL SUPPORT CENTER (WITH 3 ATTACHMENTS)</p>	<p>REVISION 04 PAGE 2 of 4</p>
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE EPIP-3.03:	
	a) BY: _____	
	DATE: _____	
	TIME: _____	
2.	LOCATION:	
	a) Verify NAPS Maintenance Bldg. - HABITABLE	a) Proceed to alternate OSC location in the Emergency Switchgear Room, Unit One side.
	b) Proceed to primary OSC located in the 3rd floor conference room of the Maintenance Bldg.	
3.	COMMUNICATION:	
	a) Via the dedicated PBX telephone, declare OSC location to Station Emergency Manager	
	b) Refer to Attachment <u>3</u> for Emergency Facility Phone Numbers	
4.	ACCOUNTABILITY:	
	a) Maintain a listing of personnel as they report to the OSC	
	b) Enter names of personnel in appropriate space of EPIP-3.03, Attachment <u>1</u>	
	c) Report names of OSC personnel to Security for accountability	

<i>NUMBER</i> EPIP-3.03	<i>PROCEDURE TITLE</i> ACTIVATION OF OPERATIONAL SUPPORT CENTER (WITH 3 ATTACHMENTS)	<i>REVISION</i> 04
		<i>PAGE</i> 3 of 4

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

5. NOTIFICATION:
- a) Notify the Station Emergency Manager of OSC activation and relay the following:
 - 1) Number of personnel in each classification
 - 2) Supervisors/Foremen present
6. PERSONNEL:
- a) Review Attachment 2 - Operational Support Center Director Guideline
 - b) Assure personnel check in when reporting to OSC
 - c) Assure personnel check out when leaving OSC
 - d) Maintain updated listing of personnel on Attachment 1 for accountability
 - e) Notify Station Emergency Manager on significant manning changes
7. DISPATCHING:
- a) Dispatch members as required by Station Emergency Manager or his designee
8. STATUS:
- a) Verify emergency status in effect
 - b) GO TO Step 6
- a) IF NOT in effect, GO TO Step 9.

<p><i>NUMBER</i></p> <p>EPIP-3.03</p>	<p><i>PROCEDURE TITLE</i></p> <p>ACTIVATION OF OPERATIONAL SUPPORT CENTER</p> <p>(WITH 3 ATTACHMENTS)</p>	<p><i>REVISION</i></p> <p>04</p> <hr/> <p><i>PAGE</i></p> <p>4 of 4</p>
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

9. TERMINATE EPIP-3.03:
- a) On direction of Station Manager deactivate the OSC
 - b) Direct personnel in OSC to return to normal station organization
 - c) Close out
 - 1) COMPLETED BY: _____
 - DATE: _____
 - TIME: _____
 - d) Forward this procedure and attachments to SNSOC for review

END

<i>NUMBER</i> EPIP-3.03	<i>ATTACHMENT TITLE</i> ACTIVATION OF OPERATIONAL SUPPORT CENTER OSC PERSONNEL LIST	<i>REVISION</i> 04
<i>ATTACHMENT</i> 1		<i>PAGE</i> 1 of 2

	<u>OPERATIONS</u>	<u>MECHANICAL</u>	<u>ELECTRICAL</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____
11.	_____	_____	_____
12.	_____	_____	_____
13.	_____	_____	_____
14.	_____	_____	_____
15.	_____	_____	_____
16.	_____	_____	_____

<p>NUMBER EPIP-3.03</p>	<p>ATTACHMENT TITLE ACTIVATION OF OPERATIONAL SUPPORT CENTER OSC PERSONNEL LIST</p>	<p>REVISION 04</p>
<p>ATTACHMENT 1</p>		<p>PAGE 2 of 2</p>

	<u>1ST AID TEAM</u>	<u>FIRE BRIGADE</u>	<u>INSTRUMENT</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____
		<u>OTHERS</u>	
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

NUMBER EPIP-3.03	ATTACHMENT TITLE OPERATIONAL SUPPORT CENTER DIRECTOR GUIDELINE	REVISION 04
ATTACHMENT 2		PAGE 1 of 2

STEP * Action/Expected Response

*Response Not Obtained

1. Initiate EPIP-3.03, Attachment 2

a) By: _____

Date: _____

Time: _____

2. Verify Organization:

a) Fire Team

b) First Aid Team

c) Damage Control Teams

d) Search and Rescue Team

e) Standby Operations Personnel

3. Responsibility:

a) Delegate teams listed in
 Step 2 as requested by the
 Station Manager or his
 designee

4. Support:

a) Provide timely updates on
 damage control activities to
 the Station Manager or his
 designee

<p>NUMBER EPIP-3.03</p>	<p>ATTACHMENT TITLE OPERATIONAL SUPPORT CENTER DIRECTOR GUIDELINE</p>	<p>REVISION 04</p>
<p>ATTACHMENT 2</p>		<p>PAGE 2 of 2</p>

(Continued)

STEP * Action/Expected Response

*Response Not Obtained

5. Terminate Attachment 2:

a) Verify OSC - De-activated

a) If not, return to previous Steps of this Attachment for reference as required.

b) Close-out

1. Completed By: _____

Date: _____

Time: _____

c) Affix this Attachment 2 to EPIP-3.03.

NUMBER EPIP-3.03	ATTACHMENT TITLE EMERGENCY FACILITY PHONE NUMBERS	REVISION 04
ATTACHMENT 3		PAGE 1 of 1

Emergency Work Area:

CONTROL ROOM

PBX NUMBER:

Unit No. 1 Control Room Operator	2512
Unit No. 1 Shift Supervisor	2511
Unit No. 2 Control Room Operator	2522
Unit No. 2 Shift Supervisor	2521

TECHNICAL SUPPORT CENTER

Station Emergency Manager	2914
Health Physics	2252
Technical Services	2263
Operations	2301
Maintenance	2254
NRC	2316

OPERATIONAL SUPPORT CENTER

Primary OSC	2746
Alternate OSC	2797

EMERGENCY OPERATIONS FACILITY

Recovery Manager	2166
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SECURITY

Secondary Alarm Station (SAS)	2221
Central Alarm Station (CAS)	2249
Shift Supervisor	2224

OTHER VEPCO NUMBERS

Veeco Information (Visitor) Center	2919
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VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-3.04	ACTIVATION OF EMERGENCY OPERATIONS FACILITY (With 4 Attachments)	04
		PAGE 1 of 6

PURPOSE

1. To provide guidance to personnel performing initial activation of EOF.

USER

Two (2) Security Team members

ENTRY CONDITIONS

1. Declaration of an Alert, Site Emergency or General Emergency;

AND
2. Direction of the Station Emergency Manager through the on-duty Security Shift Supervisor.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 03-09-83
REV. 04	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

B. J. Paxton

APPROVED

[Signature]
CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

DATE

05-24-83

NUMBER EPIP-3.04	PROCEDURE TITLE ACTIVATION OF EMERGENCY OPERATIONS FACILITY (WITH 4 ATTACHMENTS)	REVISION 04
		PAGE 2 of 6

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE EPIP-3.04:
 - a) BY: _____
 - DATE: _____
 - TIME: _____

NOTE: This procedure should be performed by two persons.

2. ENTRANCE:
 - a) Obtain door key to NAPS Training Building, Simulator, Maintenance Area and SRAC office from Security Shift Supervisor
3. AREA SET-UP:
 - a) Refer to EPIP-3.04, Attachment 1 and 2 for area locations
 - b) Locate the three (3) status boards stored in the SRAC office and place in the RAC/RM console area.

NOTE: Maps, manuals, badges, plug-in phone and other emergency supplies are stored in the SRAC office.

<p>NUMBER</p> <p>EP-IP-3.04</p>	<p>PROCEDURE TITLE</p> <p>ACTIVATION OF EMERGENCY OPERATIONS FACILITY</p> <p>(WITH 4 ATTACHMENTS)</p>	<p>REVISION</p> <p>04</p>
		<p>PAGE</p> <p>3 of 6</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. COMMUNICATIONS:

- a) Remove phone for security use from emergency supply cabinet in SRAC office and place on wall at entrance to simulator hallway.
- b) Refer to Attachment 3 for Emergency Facility Phone Numbers.

5. SECURITY:

- a) Maintain physical control of EOF and Visitors Center until relieved by VEPCO Corporate Security personnel and allow entry to:
 - 1) VEPCO EOF Team Members who possess a VEPCO ID with the initials "CERT" affixed to the back, or who are listed in the CERP Manual
 - 2) VEPCO employee with Valid ID and approved for access by the Recovery Manager or his designee
 - 3) Visitors who have positive ID stating both the individual and organization represented, and who are listed in CERP Manual or are approved for access by the Recovery Manager or his designee. This shall include representatives of federal, state and local agencies.

NUMBER EPIP-3.04	PROCEDURE TITLE ACTIVATION OF EMERGENCY OPERATIONS FACILITY (WITH 4 ATTACHMENTS)	REVISION 04
		PAGE 4 of 6

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

- a) There will be no requirement for visitors to be escorted unless deemed appropriate by the Recovery Manager, his designee or the EOF Security Supervisor.
- 4) Those individuals who do not meet the above criteria but are approved for access by the Recovery Manager
- B) Personnel Badging:
- 1) After personnel identification and authorization have been verified, each person will be issued an "EOF Security Identification Badge" that is to be displayed on the person (in the chest area) at all times while in EOF.
- 2) Badge Issuance
1. Vepco Employees (All) - white colored background (100-199)
 2. Federal Agency Personnel - blue colored background (200-299)
 3. State Agency Personnel - green colored background (300-399)
 4. Local Agency Personnel - yellow colored background (400-499)
 5. Miscellaneous Personnel - red colored background (500-599)
6. PERSONNEL ACCOUNTABILITY
- a) Prior to a person's initial entry to the EOF, security personnel will record on the "EOF Access Log" (Attachment 4) the following:

<p>NUMBER</p> <p>EPIP-3.04</p>	<p>PROCEDURE TITLE</p> <p>ACTIVATION OF EMERGENCY OPERATIONS FACILITY</p> <p>(WITH 4 ATTACHMENTS)</p>	<p>REVISION</p> <p>04</p>
		<p>PAGE</p> <p>5 of 6</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. Badge number issued.
 2. Name of individual.
 3. Social Security Number of individual.
 4. Company/organization represented.
(Vepco, include department)
 5. Access authorized by (if applicable).
 6. Whether escort is required.
 7. Time of entry.
- b) Prior to exiting the EOF, all personnel will be required to surrender their "EOF Security Identification Badge" and security personnel will record the time of exit on the "EOF Access Log."
- c) Re-entry to the EOF will require that all personnel request their previously assigned badge number for that day and, if requested by security personnel, produce positive identification. Security personnel will then record the time of re-entry on the "EOF Access Log."
- d) Access authorizations and badge number assignments will be valid through 2400 on the day received. Personnel may retain their assigned badge if staying beyond 2400.
- e) EOF Access Register will be closed-out at 2400 each day (real time). Personnel staying in the EOF after 2400 will be transferred by security to the new log.
- f) In addition to the above, all entry and exit to and from the EOF will be in accordance with established Health Physics (H.P.) procedures.

<p><i>NUMBER</i></p> <p>EPIP-3.04</p>	<p><i>PROCEDURE TITLE</i></p> <p>ACTIVATION OF EMERGENCY OPERATIONS FACILITY</p> <p>(WITH 4 ATTACHMENTS)</p>	<p><i>REVISION</i></p> <p>04</p>
		<p><i>PAGE</i></p> <p>6 of 6</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

7.

TERMINATE:

a) Verify Corporate Security personnel have assumed responsibility for EOF Security

a) IF NOT, GO TO Step 5

b) Close out

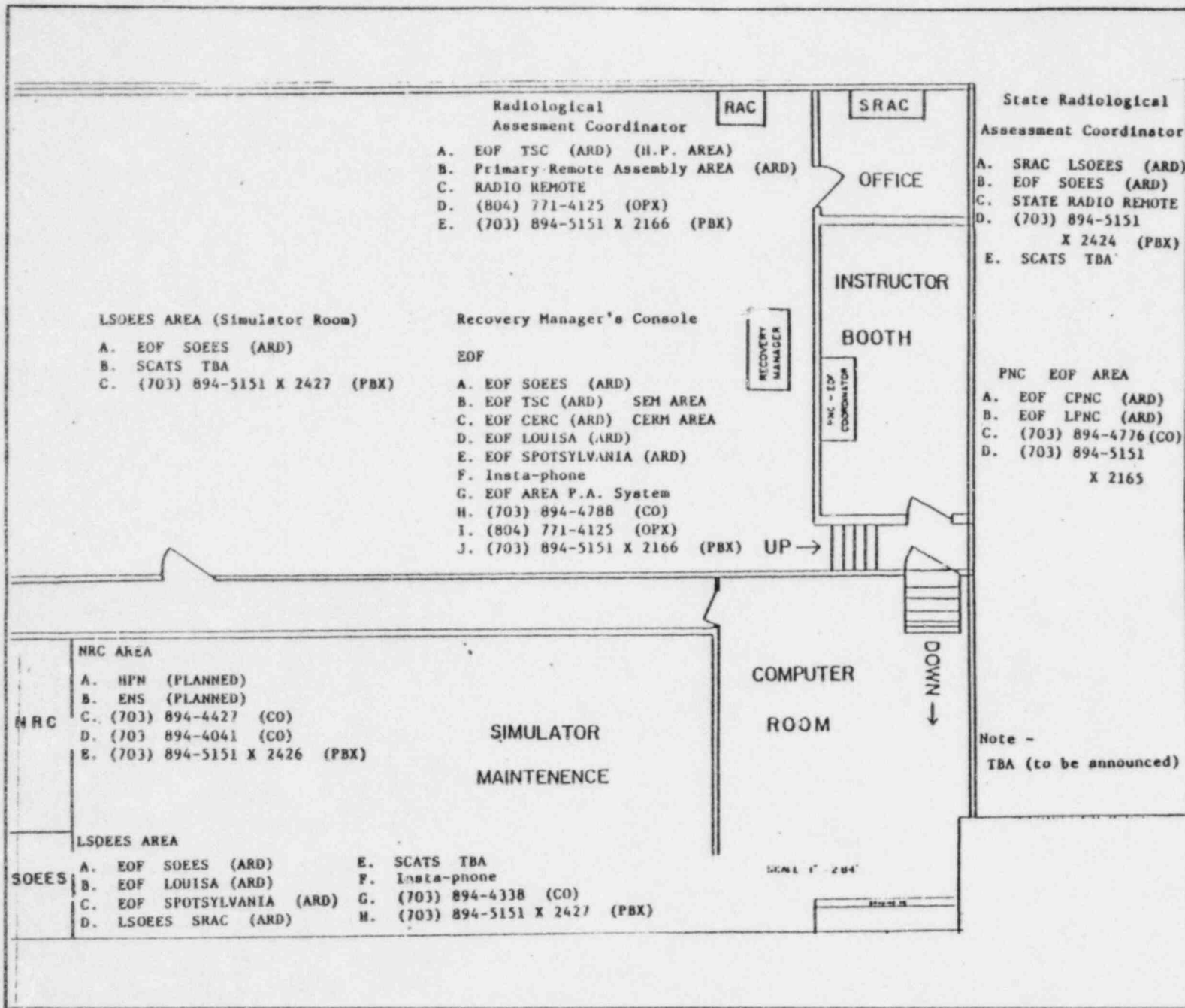
1) COMPLETED BY: _____

DATE: _____

TIME: _____

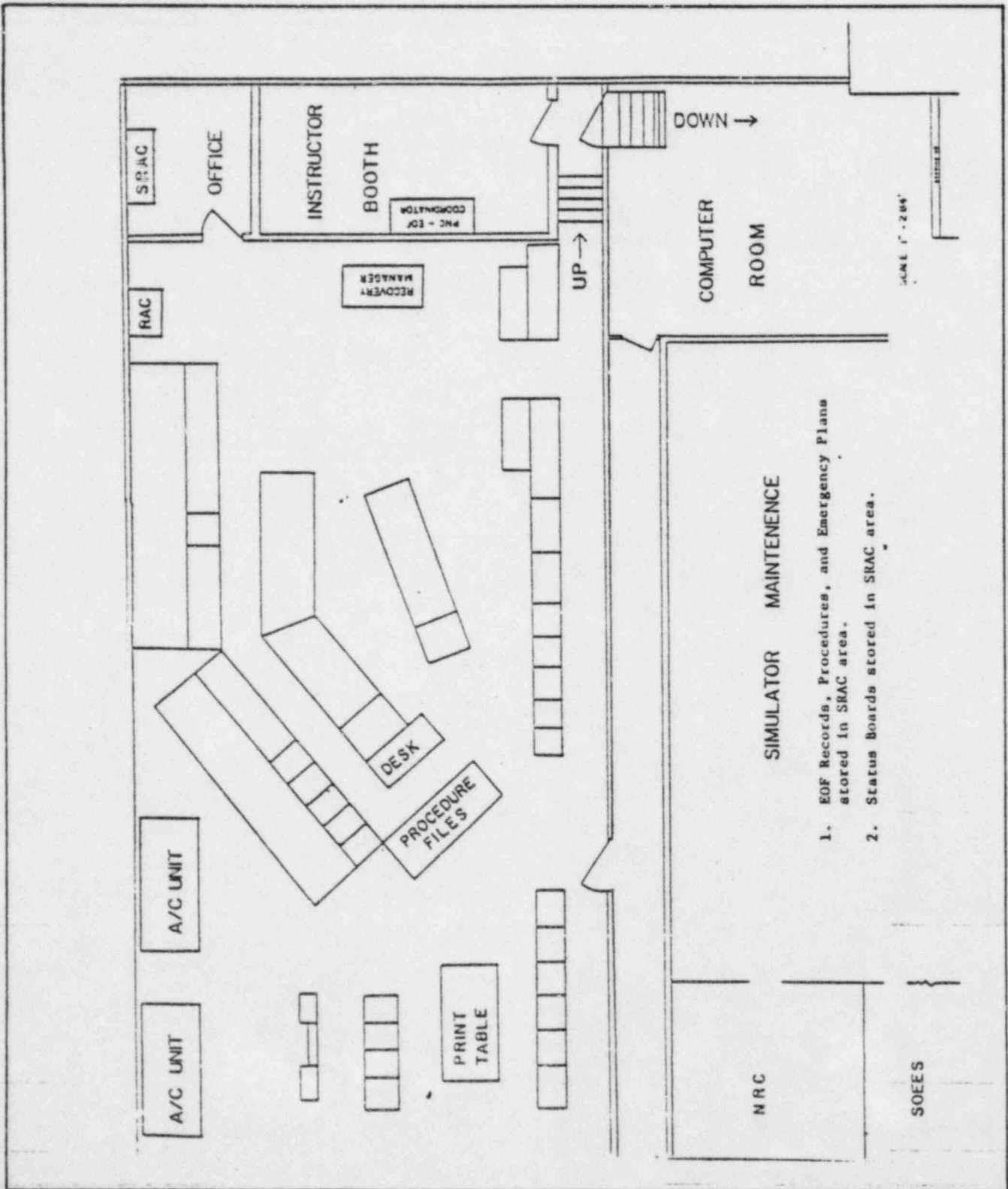
c) Forward this procedure to SNSOC for review

END



NUMBER EPIP-3.04	ATTACHMENT TITLE EMERGENCY OPERATIONS FACILITY COMMUNICATIONS	REVISION 04
ATTACHMENT 1		
		PAGE 1 of 1

<p>NUMBER EPIP-3.04</p>	<p>ATTACHMENT TITLE EMERGENCY OPERATIONS FACILITY</p>	<p>REVISION 04</p>
<p>ATTACHMENT 2</p>	<p>WORK AREAS</p>	<p>PAGE 1 of 1</p>



NUMBER EPIP-3.04	ATTACHMENT TITLE EMERGENCY OPERATIONS FACILITY WORK AREAS	REVISION 04
ATTACHMENT 3		PAGE 1 of 1

EMERGENCY WORK AREA:

CONTROL ROOM:

Unit No. 1 Control Room Operator	2512
Unit No. 1 Shift Supervisor	2511
Unit No. 2 Control Room Operator	2522
Unit No. 2 Shift Supervisor	2521

PBX NUMBER:

TECHNICAL SUPPORT CENTER

Station Emergency Manager	2914
Health Physics	2252
Technical Services	2263
Operations	2301
Maintenance	2254
NRC	2316

OPERATIONAL SUPPORT CENTER

Primary OSC	2746
Alternate OSC	2797

EMERGENCY OPERATIONS FACILITY

Recovery Manager	2166
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SECURITY

Secondary Alarm Station (SAS)	2221
Central Alarm Station (CAS)	2249
Shift Supervisor	2224

OTHER VEPCO NUMBERS

Veeco Information (Visitor) Center	2919
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VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.01	RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE (With 1 Attachment)	03 PAGE 1 of 25

PURPOSE

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

USER

Radiological Assessment Director or Senior Health Physics representation onsite.

ENTRY CONDITIONS

1. Activation by EPIP - 1.01

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<p>DATE</p> <p>05-24-83</p>
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NUMBER EPIP-4.01	PROCEDURE TITLE RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 2 of 25

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:

- a) BY: _____
DATE: _____
TIME: _____

2. CHECK CONDITIONS:

- a) The SENIOR HEALTH PHYSICS individual ONSITE should report to the CONTROL ROOM if the TSC is NOT activated

- a) IF TSC IS activated, report to the TSC.

NOTE: During the INITIAL stages of the EMERGENCY the SHIFT SUPERVISOR may assume the position of EMERGENCY MANAGER

- b) Request BRIEFING with the Emergency Manager to determine the existing PLANT CONDITIONS, EMERGENCY ACTION LEVELS (EAL'S) EXCEEDED and the CLASSIFICATION of the EMERGENCY

- c) Assume the position of RADIOLOGICAL ASSESSMENT DIRECTOR and continue with this instruction

3. INITIAL ASSESSMENT

- a) Upon CLASSIFICATION of an EMERGENCY, an INITIAL ASSESSMENT of offsite release must be made

- a) If NO actual OR POTENTIAL OFFSITE RELEASE has occurred, GO TO Step 14.

NUMBER EPIP-4.01	PROCEDURE TITLE RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 3 of 25

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	VERIFY EMERGENCY LEVEL	
	a) <u>IF</u> the event is an UNUSUAL EVENT, continue with this instruction	a) <u>IF</u> the emergency is an ALERT or GREATER, <u>GO TO</u> Step <u>6</u> .
5.	EVENT - UNUSUAL EVENT	
	a) <u>IF</u> the event is a RADIOLOGICAL RELEASE, ACTIVATE <u>EPIP-4.08, Initial Offsite Release Assessment</u> to access the percent of TECHNICAL SPECIFICATION and return to this Step	a) If the event is <u>NOT</u> a RADIOLOGICAL RELEASE <u>GO TO</u> Step <u>14</u> .
	1) <u>IF</u> the normal range monitors are ONSCALE and indicate GREATER THAN or EQUAL TO 100% TECH SPECS, but LESS THAN 1000% TECH SPECS,	1) <u>IF</u> normal range monitors indicate GREATER THAN or EQUAL TO 1000% TECH SPEC, <u>GO TO</u> Step <u>6</u> .
	<u>OR</u>	
	Normal range monitors are OFFSCALE and indicate LESS THAN 1000% TECH SPECS	
	CONFIRM classification of an UNUSUAL EVENT	
	b) REPORT RESULTS immediately to the Emergency Manager and continue with this procedure	
	c) OBTAIN SAMPLE of the effluent release path	c) <u>IF</u> sample cannot be OBTAINED return to the beginning of this step using station monitors to access the release

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

5. (CONTINUED)

OR

IF release terminates, GO TO
Step 28.

d) ANALYZE SAMPLE as per HEALTH
PHYSICS procedure H.P. 3.4.1.3

e) GO TO Step 15 for follow up
assessment

6. EVENT - ALERT, SITE OR GENERAL

a) IF the emergency is classified
as an ALERT, SITE OR GENERAL
EMERGENCY

a) IF the event is NOT a RADIO-
LOGICAL RELEASE, GO TO Step
14.

AND

A radiological release has
occurred OR may potentially
occur, continue with this
procedure

7. EVENT - CONDITION IV LIMITING
FAULTS

a) IF the type of Accident is a
LIMITING FAULT accident,
(LOCA, Steam Generator Tube
Rupture, Main Steam Line Rup-
ture OR Fuel Handling Acci-
dent) continue with this
instruction

a) IF type of accident is NOT
a LIMITING FAULT GO TO
Step 12.

8. EVENT - FUEL HANDLING ACCIDENT

a) IF Event is a FUEL HAND-
LING ACCIDENT, RECOMMEND
EVACUATION of the Fuel
Building AND/OR affected
containment

a) IF EVENT is NOT a Fuel Hand-
ling Accident, GO TO Step 9.

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8.	(CONTINUED) b) RESTRICT ACCESS until radiological assessment can be made c) ASSIGN EPIP-4.06, <u>PERSONNEL MONITORING AND DECONTAMINATION</u> to the Health Physics staff to monitor and decontaminate, as necessary, individuals evacuated from the accident area d) Activate EPIP 4.08, <u>INITIAL OFFSITE RELEASE ASSESSMENT</u> , to determine offsite consequences of the accident and return to this step e) REPORT RESULTS of the above step to the Emergency Manager f) <u>GO TO Step 13</u>	c) Continue with this instruction if individuals found non-contaminated.
9.	EVENT - STEAM GENERATOR TUBE RUPTURE a) <u>IF</u> the event is a Steam Generator Tube Rupture REQUEST the following INFORMATION from the Emergency Manager 1) Status of the Air Ejector divert 2) The number of Steam Generator Relief Valves which have lifted <u>OR</u> may potentially lift 3) <u>IF</u> relief valves have lifted, length of time valves remained open	a) <u>IF</u> the event is <u>NOT</u> a Steam Generator Tube Rupture <u>GO TO Step 10</u> .

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
9.	(CONTINUED)	
	4) Status of main steam supply to the Auxilary Feedwater Pump Turbine	4) <u>IF</u> AFPT is isolated, release from this pathway may be disregarded.
	<p><u>NOTE:</u> <u>IF</u> the main steam supply from the leaking steam generator has <u>NOT</u> been isolated, request the Emergency Manager to initiate isolation of the steam supply.</p>	
	5) Request placement of operation personnel in the Emergency Switchgear Room to report INITIAL readings and any INCREASE OR DECREASE in the MAIN STEAM MONITORS and the AFPT exhaust monitors	
	6) Request current Steam Generator Blowdown pathway	
	b) <u>ACTIVATE EPIP 4.08, Initial Offsite Release Assessment and return to this Step</u>	
	c) <u>REPORT RESULTS</u> of the above step to the Emergency Manager	
	d) <u>RESTRICT ACCESS</u> to the Steam Generator Blowdown Cooler area, Steam Generator Blowdown Lines, Steam Generator Relief Valve area and the AFPT exhaust area, until a survey confirms no radiological hazards	

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

9. (CONTINUED)

e) IF personnel are available consider ACTIVATION of EPIP-4.23, Post Accident Sampling of Reactor Coolant, to assess core damage.

e) IF personnel are NOT available, consider sampling upon arrival of additional manpower

AND

continue with this instruction

f) Consider sampling of Steam Generator Blowdown and Main Steam of Affected Unit

NOTE: Potential liquid release pathway may occur through the Main Steam Safety Valve.

g) GO TO Step 13

10. EVENT MAIN STEAM LINE RUPTURE

a) IF a Main Steam Line Rupture occurs, observe station ventilation monitors

a) IF event is NOT a Main Steam Line Rupture, GO TO Step 11.

1) IF station monitors have indicated a release

1) IF station monitors DO NOT indicate a release

OROR

IF there was primary to secondary leakage PRIOR to the event

IF there was NO primary to secondary leakage PRIOR to the accident, GO TO Sub-step b.

ACTIVATE EPIP 4.08,
Initial Offsite Release Assessment

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

10. (CONTINUED)

- b) REPORT RESULTS to the
Emergency Manager

NOTE: IF no initial releases have occurred because of prior primary to secondary leakage, source term may develop inside containment or may result from Main Steam Relief Valve lifting

- c) Request from the Emergency Manager the following information and continue with this instruction

- 1) Location of Steam Break
- 2) Actual or potential lifting of Main Steam Safety Valves
- 3) IF valves have lifted, length of time valve remained open
- 4) Status of Auxiliary Feedwater Pump Turbine (isolation)

- 4) IF Main Steam supply to the Auxiliary Feedwater Pump Turbine has been isolated, no release will occur through this pathway

- 5) Monitor Reading on Main Steam Monitors and AFPT exhaust monitors

- d) IF manpower is available, consider ACTIVATION of EPIP-4.22, Post Accident Sampling of Containment Air

- d) IF manpower is NOT available continue with this procedure

AND

Consider activation once manpower is available

AND

EPIP 4.23, Post Accident Sampling of Reactor Coolant

- e) GO TO Step 13

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

11. EVENT - LOCA

- | | |
|--|---|
| <p>a) <u>IF</u> the event is a LOCA, recommend EVACUATION of the Auxiliary Building and Safeguards Building, and RESTRICT entry, until survey confirm no radiological hazards within these areas</p> <p>b) Activate EPIP-4.08, <u>Initial Offsite Release Assessment</u> to initially access any offsite release and return to this step</p> <p>c) REPORT RESULTS of the above Step to the Emergency Manager</p> | <p>a) <u>IF</u> event is <u>NOT</u> a LOCA <u>GO TO</u> Step <u>12</u>.</p> <p>b) <u>IF NO</u> offsite releases have occurred, continue with this instruction</p> |
|--|---|

NOTE: LOCA accident may not initially result in large release, but may produce a large source with a potential for release from the containment building

- | | |
|--|--|
| <p>d) Consider activation of EPIP-4.23, <u>Post Accident Sampling of Reactor Coolant</u> and EPIP-4.22, <u>Post Accident Sampling of Containment Air</u> when manpower becomes available</p> <p>e) <u>GO TO</u> Step <u>13</u></p> | <p>d) If manpower is not available, continue with this instruction and consider activation once manpower is available.</p> |
|--|--|

12. EVENT - RADIOLOGICAL RELEASE

- | | |
|---|--|
| <p>a) <u>IF</u> the event is a RADIOLOGICAL RELEASE, continue with this instruction</p> | <p>a) <u>IF</u> event is <u>NOT</u> a RADIOLOGICAL RELEASE, <u>GO TO</u> Step <u>14</u>.</p> |
|---|--|

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12.	<p>(CONTINUED)</p> <p>b) ACTIVATE EPIP-4.08, Initial <u>Offsite Release Assessment</u> to initially assess offsite releases</p> <p>c) REPORT RESULTS of the above step to Emergency Manager</p> <p>d) REQUEST from the Emergency Manager placement of an individual at the monitor of release pathway to report increase or decrease in monitor readings</p>	
13.	<p>PROTECTIVE MEASURES</p> <p>a) <u>IF</u> the results from Offsite Release Assessment are greater than or equal to <u>50 mR/hr WHOLE BODY OR 250 mR/hr THYROID</u> at the Site Boundary, continue with this instruction</p> <p>b) Obtain from the Emergency Manager, an ESTIMATE of DURATION of the RELEASE (hours)</p> <p>c) Determine Projected Dose</p> <p>1) Use the following formula to determine site boundry dose for Whole Body and Thyroid</p>	<p>a) <u>IF</u> results from Offsite Release Assessment are less than <u>50 mR/hr WHOLE BODY OR 250 mR/hr THYROID</u> at the Site Boundary, <u>GO TO</u> Step <u>14</u>.</p> <p>b) <u>IF</u> no estimate can be given assume release will last for <u>3</u> hours</p>
	<p>Duration of Release X Site Boundary (mR/hr) = Projected Dose (mR) (hours) Dose Rate</p>	

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
13.	(CONTINUED)	
	<p>d) <u>IF</u> the Projected Dose is GREATER THAN OR EQUAL TO 500 mR WHOLE BODY</p>	<p>d) <u>IF</u> PROJECTED DOSE is LESS THAN 500 mR WHOLE BODY</p>
	<p><u>OR</u></p>	<p><u>OR</u></p>
	<p>GREATER THAN OR EQUAL TO 1000 mR THYROID</p>	<p>LESS THAN 1000 mR THYROID</p>
	<p>ACTIVATE EPIP 4.07, <u>Protective Measures</u> and return to this step</p>	<p>Inform the Emergency Manager that <u>NO</u> PROTECTIVE MEASURES are required offsite</p>
		<p><u>AND</u></p>
		<p><u>GO TO</u> Step <u>14</u></p>
	<p>e) Continue with substep <u>a</u> through <u>d</u> using the dose rate for 2,5 and 10 miles</p>	
	<p>f) Recommend to the Emergency Manager the PROTECTIVE MEASURES required OFFSITE</p>	<p>f) <u>IF NO</u> PROTECTIVE MEASURES are required, <u>GO TO</u> Step <u>14</u>.</p>
	<p><u>AND</u></p>	
	<p>The DISTANCE PROTECTIVE MEASURES are required</p>	
14.	EVENT - INJURED CONTAMINATED INDIVIDUAL	
	<p>a) <u>IF</u> the event is an Injured Contaminated Individual</p>	<p>a) <u>IF</u> the event is <u>NOT</u> an Injured Contaminated Individual <u>GO TO</u> Step <u>15</u>.</p>
	<p><u>AND</u></p>	
	<p>Requires Offsite Medical Treatment</p>	
	<p>ACTIVATE EPIP 4.20 <u>HEALTH PHYSICS ACTIONS for TRANSPORTATION of CONTAMINATED INJURED INDIVIDUAL</u></p>	

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

14. (CONTINUED)

- 1) Review survey to confirm personnel contamination

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

- | | |
|--|--|
| <ol style="list-style-type: none"> 2) Insure clothing removal and/or onsite decontamination can <u>NOT</u> be used to remove contamination 3) Insure a Health Physics individual is available to accompany the victim 4) Recommend to the Emergency Manager transportation of the victim to MCV 5) If the event was initiated only for contaminated injured individual requiring offsite medical treatment | <ol style="list-style-type: none"> 2) <u>IF</u> individual can be deconned, <u>GO TO</u> substep <u>5</u>. 5) <u>IF</u> other EAL'S were exceeded <u>GO TO</u> Step <u>15</u>. |
|--|--|

AND

NO other EAL'S have been exceeded

GO TO Step 28

15. FOLLOW-UP ASSESSMENT

- | | |
|--|---|
| <ol style="list-style-type: none"> a) <u>IF</u> TSC is <u>NOT</u> activated continue with this instruction b) One member of the Health Physics group should remain in the control room to assist the Emergency Manager | <ol style="list-style-type: none"> a) <u>IF</u> TSC <u>IS</u> activated <u>GO TO</u> Step 17 |
|--|---|

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

15. (CONTINUED)

NOTE: IF conditions require presence in another location, inform the Emergency Manager and report back to the Control Room after completion of task

c) IF a Radiological Release has occurred,

1) OBTAIN if possible SAMPLES of the effluent

2) As time allows, ACTIVATE EPIP-4.03, DOSE ASSESSMENT Controlling Procedure

d) Insure dose control individual is available to supply dosimetry

e) Provide Health Physics coverage as needed, for damage control teams, access control, personnel monitoring and radio analysis

f) IF the Emergency has terminated GO TO Step 28

c) IF NO release has occurred GO TO substep d.

1) IF NO samples are obtained continue with this instruction using Monitor readings for follow-up assessment

f) IF the Emergency has NOT terminated

OR

IF the TSC is NOT manned, Return to Step 13

AND

Repeat sampling and assessment as necessary.

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

16. VERIFY RELIEF

a) When a more Senior Health Physics individual arrives onsite

a) IF relief is NOT needed, GO TO Step 17.

OR

IF relief is needed:

1) Brief successor as to the existing plant conditions, offsite release assessment performed

AND

Health Physics actions currently underway

2) Announce the change of position to the Emergency Manager

17. ESTABLISH EMERGENCY ORGANIZATION

a) IF the Health Physics Emergency Organization has not been activated, continue with this procedure

a) IF Emergency Organization has been activated, GO TO Step 18.

b) Establish the Dose Assessment Team and assign EPIP-4.03, Dose Assessment Controlling Procedure

b) IF manpower is NOT yet available, continue with this instruction assigning EPIP-4.03 when manpower becomes available

c) Establish the position of Radiation Protection Supervisor and assign EPIP-4.02, Radiation Protection Supervisor Controlling Procedure

c) IF manpower is NOT yet available, continue with this instruction assigning EPIP-4.03 when manpower becomes available.

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

18. OFFSITE ASSESSMENT

a) IF offsite releases have occurred, request from the Emergency Manager an individual to man the Radiation Monitor on the release pathway

AND

Report any increase OR decrease in monitor readings

b) The following information will be supplied periodical OR upon request

- 1) Meteorological Data
- 2) Radiation Monitor System Data
- 3) Sample Analysis Data

c) Upon receipt of the above data, complete attachment 1

1) Give attachment 1 to the Dose Assessment Team

d) Evaluate the need for OFF-SITE MONITORING TEAMS with the Dose Assessment Team Leader

a) IF NO offsite releases have occurred

OR

IF there is NO potential for a release

GO TO Step 20.

NOTE: During a Site or General Emergency a minimum of two monitoring teams should be dispatched for Offsite Monitoring.

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

18. (CONTINUED)

NOTE: The function of plume tracking/offsite monitoring will be the responsibility of the Radiological Assessment Coordinator, upon activation of the EOF

- | | |
|---|---|
| <p>1) <u>IF</u> EOF is <u>NOT</u> activated and offsite monitoring teams are required, request the Radiation Protection Supervisor to <u>ACTIVATE</u> EPIP-4.16, <u>Offsite Monitoring</u></p> <p>2) Advise Radiation Protection Supervisor as to the number of teams required</p> <p>3) Consult with the Dose Assessment Team Leader, the probable exposure levels that may be received by the Offsite Monitoring Teams</p> <p>4) <u>IF</u> the Whole Body exposure to the Offsite Teams may exceed 10 CFR 20 limits <u>ACTIVATE</u> EPIP-4.04, <u>Emergency Exposure Limits</u></p> | <p>1) <u>IF</u> EOF is activated, <u>GO TO</u> Step <u>20</u>.</p> <p>2) <u>IF</u> adequate manpower is <u>NOT</u> available reassess the need for Offsite Monitoring Teams upon arrival of additional manpower</p> |
|---|---|

AND

GO TO Step 20.

OR

IF Thyroid exposure is expected to exceed 10 REM, ACTIVATE EPIP 5.07, Administration of Radioprotective Drugs

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

18. CONTINUED)

5) Inform the Radiation Protection Supervisor of protective clothing and respiratory protection required for Offsite Teams

6) Assist the Dose Assessment Team Leader as to the placement of Offsite Monitoring Teams

e) Obtain the latest Offsite Release Assessment Data Sheet from the Dose Assessment Team Leader

e) IF Offsite Release Data is NOT available, GO TO Step 20

AND

Return when data becomes available

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
18.	(CONTINUED)	
	1) <u>IF</u> the dose rate Offsite is greater than or equal to 50 mR/hr Whole Body or 250 mR/hr Thyroid continue with this instruction.	1) <u>IF</u> the Dose Rate Offsite is Less Than 50 mR/hr Whole Body or 250 mR/hr Thyroid, <u>GO TO</u> Step <u>20</u> .
19.	PROTECTIVE MEASURES	
	a) Obtain from the Emergency Manager, an Estimate of the DURATION of the RELEASE (hours)	
	b) Determine Projection Dose	
	1) Use the following formula to determine site boundry dose for Whole Body or Thyroid	
	Duration of Release X Site Boundary Dose Rate (mR/hr) = Projected Dose (mR) (hours)	
	c) <u>If</u> the Projected Dose is GREATER THAN OR EQUAL TO 500mR Whole Body <u>OR</u> GREATER THAN OR EQUAL TO 1000 mR Thyroid <u>ACTIVATE EPIP 4.07, Protective Measures and return to this Step</u>	c) <u>IF</u> Projected Dose is LESS THAN <u>500</u> mR Whole Body <u>OR</u> LESS THAN 1000 mR Thyroid Inform the Emergency Manager that <u>NO</u> PROTECTIVE MEASURES are required offsite <u>AND</u> <u>GO TO</u> Step <u>20</u> .
	d) Continue with substep <u>a</u> through <u>c</u> using dose rates for 2,5, and 10 miles	

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
19.	(CONTINUED) e) Recommend to the Emergency Manager the PROTECTIVE MEASURES required OFFSITE <u>AND</u> The DISTANCE PROTECTIVE MEASURES are required	e) <u>IF NO PROTECTIVE MEASURES</u> are required, <u>GO TO Step 20.</u>
20.	EOF ACTIVATION a) <u>IF</u> EOF is Activated: 1) Brief the Radiological Assessment Coordinator as to the existing plant conditions, offsite dose projections and current Health Physics actions underway 2) Inform Dose Assessment Team Leader to brief Radiological Assessment Coordinator on all Offsite Assessment, completed to date and the status and location of offsite monitoring teams. 3) Insure an individual remains available in the Radiological Assessment area to transmit meteorological, monitor and sample analysis data to the EOF	a) <u>IF</u> EOF has <u>NOT</u> been activated, <u>GO TO Step 21.</u>
21.	ESTABLISH IN-PLANT MONITORING: a) Instruct Radiation Projection Supervisor to activate EPIP-4.14, <u>Inplant Monitoring</u> and EPIP-4.15, <u>Onsite Monitoring</u> as necessary	a) <u>IF</u> no monitoring is needed, <u>GO TO</u> substep <u>e.</u>

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

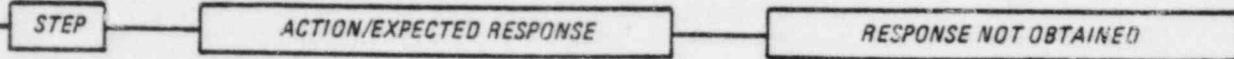
21. (CONTINUED)

- b) Brief Radiation Projection Supervisor as to existing plant conditions
 - c) Assist in selecting proper monitoring and sampling areas
 - d) Assist Radiation Protection Supervisor in determining proper protective gear and dosimetry. Aid in developing any special precautions necessary for in-plant monitoring
 - e) Request from the Radiation Protection Supervisor technical assistance in establishing initial and periodic monitoring of TSC and EOF
 - l) Based on survey data and plant conditions establish routine for surveys of the Emergency Centers
- c) IF no monitoring is needed, continue with substep e.

NOTE: IF a radiological release has taken place, notify the Radiation Protection Supervisor to resurvey Emergency Centers upon change of plume direction or increase in release.

- f) Based on survey data, direct the establishment of new control points to control the spread of contamination and/or limit exposure

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22. ENTRANCE - ACCESS CONTROL AREA

a) All planned access into Controlled areas should require an evaluation of Radiological Hazards prior to entrance

b) Assist Emergency Manager in obtaining Health Physics coverage, if necessary

c) Consult with the Radiation Protection Supervisor as to the entrance requirements

1) Request initiation of a Radiation Work Permit as per the Health Physics Manual for entrance

a) IF entrance is not required GO TO Step 23.

23. RESPIRATORY PROTECTION:

a) Assess results of air sampling

b) Recommend evacuation of all non-essential personnel in areas that:

1) High airborne activity is expected but not measured

2) Airborne activity is greater than 0.25 times maximum permissible concentration

1) Airborne contamination is not suspected, GO TO Step 25.

2) Maximum permissible concentration less than or equal to 0.25 MPC, GO TO Step 25.

c) For all essential workers assess respiratory protection as needed per EPIP-4.05 Respiratory Protection and return to this step

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

24. DETERMINE THE NEED FOR RADIOPROTECTIVE DRUGS:

NOTE: Administration of Potassium Iodide Tablets is preferably done prior to exposure, although administration of the drug within 2 hours is considered acceptable

- | | |
|---|--|
| <p>a) Activate EPIP 5.07, <u>Administration of Radioprotective Drugs</u> to assess need for use of radioprotective drugs and return to this step</p> <p>b) <u>IF</u> the actual or projected exposure will be <u>GREATER THAN OR EQUAL TO 10 Rem</u> thyroid (without respiratory protection) recommend administration of thyroid blocking tablets</p> <p>c) Request approval from the Emergency Manager to Administer radioprotective drugs.</p> <p>d) Supply of tablets is located at North Anna Medical Facilities</p> | <p>b) <u>IF</u> thyroid exposure will be less than <u>10 Rem</u>, <u>GO TO</u> Step <u>25</u>.</p> <p>d) Alternate supply located at Surry Power Station</p> |
|---|--|

25. ONSITE EVACUATION OF NON-ESSENTIAL PERSONNEL:

- a) Discuss with Dose Assessment Team Leader, the projected or actual whole body and/or thyroid exposure onsite from release of radioactive material
- b) Determine direction of plume
- c) Determine from Emergency Manager the probable duration of release

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
25.	(CONTINUED) d) <u>IF</u> actual or projected exposure onsite is <u>GREATER THAN OR EQUAL TO 1</u> Rem whole body <u>OR</u> GREATER THAN OR EQUAL TO <u>5</u> Rem Thyroid <u>AND</u> Plume is <u>NOT</u> in the direction of the evacuation route RECOMMEND EVACUATION of all non-essential personnel e) Report recommendation to the Emergency Manager	d) <u>IF</u> dose is <u>LESS THAN EVACUATION LIMITS</u> <u>OR</u> <u>IF</u> plume is in the direction of the evacuation route, consider sheltering of non-essential workers
26.	EMERGENCY EXPOSURE TO RADIATION WORKERS: a) Prior to entry into a high radiation areas, where whole body exposure may exceed 10CFR20 exposure limits, activate EPIP-4.04, <u>Emergency Personnel Radiation Exposure</u> , and return to this procedure	a) <u>IF</u> entry into high radiation areas will not cause exceedance of 10CFR20 exposure limits, <u>GO TO Step 27.</u>
27.	DOSIMETRY FOR OFFSITE ASSISTANCE a) <u>IF</u> Offsite Assistance is required to mitigate the emergency (fire and/or rescue squads) 1) Inform Radiation Protection Supervisor of their arrival at the Station	a) <u>IF</u> Offsite Assistance is <u>NOT</u> required, <u>GO TO Step 28.</u>

<p>NUMBER</p> <p>EPIP-4.01</p>	<p>PROCEDURE TITLE</p> <p>RADIOLOGICAL ASSESSMENT DIRECTOR</p> <p>CONTROLLING PROCEDURE</p>	<p>REVISION</p> <p>03</p> <hr/> <p>PAGE</p> <p>24 of 25</p>
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
27.	<p>(CONTINUED)</p> <p>2) Request dosimetry to be supplied at the Security building prior to their entrance onsite</p>	
28.	<p>VERIFY EMERGENCY:</p> <p>a) <u>IF</u> Emergency condition still exists:</p> <p>1) Return to Step 16 and direct the repetition of surveys, radiological sampling and/or dose assessment to determine status of the emergency</p> <p>2) Advise the Emergency Manager and the Radiation Protection Supervisor as to the increasing or decreasing trends of Emergency</p>	<p>a) <u>IF</u> the Emergency Manager declares termination of the Emergency, <u>GO TO</u> Step 29.</p>
29.	<p>EVENT TERMINATION:</p> <p>a) Termination of Emergency declared by Emergency Manager</p> <p>1) Notify Radiation Protection Supervisor and Radiation Assessment Coordinator of termination of Emergency</p> <p>2) Evaluate further use of monitoring team(s) for data collection</p> <p>3) Request review of recovery phase with the Emergency Manager and consider the following:</p>	

NUMBER EPIP-4.01	PROCEDURE TITLE RADIOLOGICAL ASSESSMENT DIRECTOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 25 of 25

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
29.	(CONTINUED)	
	a) Access control to outside contaminated areas b) Return to normal access control, areas throughout site c) Assistance for decontamination effort, Health Physics support personnel and radwaste packaging and disposal	
30.	ADMINISTRATION:	
	a) Initiate replacement of procedure and/or emergency equipment if necessary b) Forward completed procedures, release calculations and survey results to the Emergency Manager	
31.	TERMINATE EPIP-4.01:	
	a) COMPLETED BY: _____	
	DATE: _____	
	TIME: _____	
END		

<i>NUMBER</i> EPIP-4.01	<i>ATTACHMENT TITLE</i> RADIOLOGICAL DATA WORKSHEET	<i>REVISION</i> 03
<i>ATTACHMENT</i> 1		<i>PAGE</i> 1 of 1

DATE: _____ TIME: _____ UNIT # _____

Meteorological Data:

WIND DIRECTION (from): _____
 SECTORS AFFECTED: _____
 WIND SPEED (mph): _____
 PRECIPITATION: _____
 STABILITY CLASS: _____

RADIATION MONITORING SYSTEM DATA:

<u>MONITOR</u>	<u>CPM OR MR/HR</u>
VENT VENT _A (VG-104)	_____
VENT VENT _B (VG-113)	_____
PROCESS VENT (GW-102)	_____
AIR EJECTOR (SV-121,122)	_____
VENT VENT _A (VG-174)	_____
VENT VENT _B (VG-175)	_____
PROCESS VENT (GW-173)	_____
MAIN STEAM (____)	_____
AFPT (____)	_____
CONT. HIGH RANGE	_____

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.02	RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE (With No Attachments)	03
		PAGE
		1 of 16

PURPOSE

To assist Radiological Assessment Director in establishment of radiation protection program during an emergency and dispatching monitoring teams.

USER

Assistant Health Physics Supervisor, Health Physicist or Health Physics Technician.

ENTRY CONDITIONS

Any one of the following :

1. Emergency classification of alert.
2. Activation by another EPIP.
3. Any other time the Radiological Assessment Director deems it necessary.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

B. J. Patton

APPROVED

[Signature]

CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

DATE

05-24-83

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 2 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: IF Health Physics area becomes uninhabitable, relocate Health Physics staff to the OSC or the Emergency Switchgear Room.

NOTE: Record the sequence of events (i.e., transmission of data, dispersment of teams, etc.) as accurately as time allows, including time of event and initials.

1. INITIATE PROCEDURE:

a) Initiated By: _____
 Date: _____
 Time: _____

2. ESTABLISH COMMUNICATION

Upon activation of the TSC, establish communication by:

a) Telephone

- 1) Locate a telephone in work area
- 2) Call the TSC at extension 2252

b) Radio

- 1) Obtain a portable radio from health Physics Office
- 2) Activate EPIP-4.19, Use of Radios for Health Physics Monitoring
- 3) Contact the TSC

b) IF radio does not work or cannot be found, obtain a radio from operations or security.

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03 PAGE 3 of 16
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	PERFORM ACCOUNTABILITY a) Perform accountability as per EPIP 5.03, <u>Personnel Accountability</u> b) Report Health Physics readiness to the Radiological Assessment Director 1) Report the number of H.P. personnel onsite (minimum of <u>14</u> upon Alert classification)	1) <u>IF</u> minimum number of personnel are <u>not</u> available, activate callout of the H.P. personnel, as necessary.
4.	DETERMINE PLANT STATUS a) Request briefing with the Radiological Assessment Director as to the plant status, assistance required and Emergency classification	
5.	ESTABLISH DOSE CONTROL a) Insure individual is available to man dose control station b) <u>IF</u> dose control station becomes uninhabitable consider relocation to the OSC 1) Place a supply of TLD ribbons in the annealing oven to minimize residual dose on ribbons 2) The manual TLD reader may be removed to another location	a) <u>IF</u> individual is stationed at dose control, <u>GO TO</u> Substep c b) <u>IF</u> dose control is habitable, continue with this instruction.

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 4 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

5. (CONTINUED)

- c) Request dose control individual to maintain exposure records and issue dosimetry as per H.P. procedures, H.P. 3.1.1 and H.P. 3.1.2

6. ACTIVATE INPLANT MONITORING

IF need for inplant monitoring is determined:

IF monitoring teams NOT required, GO TO Step 7.

- a) Request from Radiological Assessment Director:
- 1) Location of required monitoring
 - 2) Type of surveys required
- b) Request assessment of possible Radiological hazards in in area of requested surveys
- c) Activate EPIP-4.14, Inplant Monitoring
- d) Select 2 individuals if entering an area suspected to be GREATER THAN or EQUAL TO 1000 mR/HR
- 1) Only 1 individual must be a H.P. technician
- e) Advise monitoring team as to the location and surveys required

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 5 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. (CONTINUED)
- f) Using information from the above substep b, determine protective gear required:
- 1) respirators
 - 2) protective clothing
 - 3) dosimetry
- g) Suggest routes of entry that may reduce exposure
- h) Dispatch team(s)
- i) Upon receipt of survey information, transmit data to the Radiological Assessment Director

7. ACTIVATE ONSITE MONITORING

NOTE: Onsite monitoring teams should be dispatched upon Alert classification, as specified by Radiological Assessment Director.

IF need for onsite monitoring is determined:

IF onsite monitoring NOT required, GO TO Step 8.

- a) Request from Radiological Assessment Director the location of desired monitoring and the surveys required

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03 PAGE 6 of 16
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7.	(CONTINUED)	
	b) Request from the Radiological Assessment Director an evaluation of radiological hazards in area of requested surveys	
	1) If air samples are required vehicle should be obtained to power portable air sampler	1) <u>IF</u> no vehicles are available, consider the use of the self-contained battery powered air samplers.
	c) If transportation is required assist in obtaining a vehicle	
	1) <u>IF</u> necessary, request assistance from Radiological Assessment Director	
	d) Activate EPIP-4.15, <u>Onsite Monitoring</u>	
	e) Select <u>2</u> individuals per team only <u>1</u> need be a H.P. technician	e) <u>1</u> individual may be dispatched <u>if</u> suspected radiation levels are LESS THAN <u>1000</u> mR/HR.
	f) Use information from above substep <u>b</u> to determine protective gear required:	
	1) respirators	
	2) protective clothing	
	3) dosimetry	
	g) Dispatch monitoring team(s)	
	h) Establish radio communication with monitoring team(s) <u>IF</u> radios are available	h) Continue with this instruction <u>IF</u> radios are <u>NOT</u> available.

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03 PAGE 7 of 16
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7.	(CONTINUED)	
	1) Upon receipt of survey results, transmit data to the Radiological Assistant Director	
8.	ESTABLISH ACCESS CONTROL	
	Based on survey results and/or briefing with the Radiological Assessment Director, establish positive access control over the Auxiliary Building and/or other high Radiation Areas	IF the emergency is <u>NOT</u> radiological in nature, normal station access control will be followed. <u>GO TO Step 9.</u>
	a) Establish access control by:	
	1) Requiring H.P. notification prior to entry	
	2) Use of Radiation Work Permits as per Section 2 of the Health Physics Manual	
	b) Suggested access control limits	
	1) Airborne contamination of $0.25 \frac{\text{CONC}_i}{\text{MPC}_i}$	
	<u>OR</u>	
	2) GREATER THAN or EQUAL TO <u>1000</u> DPM per <u>100</u> cm ²	
	<u>OR</u>	
	3) GREATER THAN or EQUAL TO <u>1000</u> mR/HR	

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03 PAGE 8 of 16
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
9.	ACTIVATE OFFSITE MONITORING	
	<p><u>NOTE:</u> Offsite Monitoring Team(s) should be dispatched upon classification of Site or General Emergency, as specified by the Radiological Assessment Director.</p>	
	a) Review with the Radiological Assessment Director:	
	1) Need for Offsite Monitoring teams	1) <u>IF</u> offsite monitoring <u>NOT</u> required, <u>GO TO</u> Step <u>10</u> .
	2) Initial location and number of offsite teams required	
	3) Assessment of offsite radiological hazards	
	4) Need to issue radioprotective drugs to monitoring teams	
	b) Activate EPIP-4.16, <u>Offsite Monitoring</u>	
	c) Select <u>2</u> individuals per team. <u>Only 1</u> need be a H.P. technician	
	d) Assist in obtaining a vehicle	
	1) Health Physics truck	
	2) Station Manager's car	
	e) Assign an emergency kit, located at the station's Medical Center	

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 9 of 16

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

9. (CONTINUED)

- 1) Assign a battery powered air sampler
- 2) Assign RM-14 with H.P. 210 probe
- 3) Record number of Emergency kits issued
- f) Brief team on the initial location they are to report
- g) Review protective gear required:
 - 1) Respirator and/or radio-protective drugs
 - 2) Protective clothing
 - 3) Dosimetry
- h) Dispatch Monitoring team

10. ACTIVATE TSC/OSC/EOF MONITORING

Upon Alert classification because of a radiological event, monitor emergency response centers.

IF event is NOT radiological in nature, GO TO Step 11.

- a) Determine frequency of monitoring based upon:
 - 1) spread of contamination from service buildings
 - 2) Increase or decrease of effluent release

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 10 of 16

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED		
10.	(CONTINUED) 3) Increase in emergency classification 4) Change in plume direction b) Assign: i) EPIP-4.17, <u>Monitoring of OSC and TSC</u> <u>AND</u> 2) EPIP-4.18, <u>Monitoring of EOF</u> <u>NOTE:</u> Health Physics personnel should begin monitoring of the EOF within 60 minutes following an ALERT classification. c) Inform Radiological Assessment Director as to the habitability of the emergency response centers			
11.	CONTAMINATED PERSONNEL a) <u>IF</u> station personnel are found contaminated, assign an individual to ACTIVATE EPIP-4.06, <u>Personnel Monitoring and Decontamination</u>	a) <u>IF</u> no station personnel are contaminated, continue with this instruction.		
12.	CONTAMINATED INJURED PERSONNEL			
<u>NOTE:</u> <u>IF</u> injury is life threatening, <u>GO TO</u> substep <u>d</u> of this step.				
<table> <tr> <td> <u>IF</u> an individual is injured and requiring transportation to offsite hospital, determined to be contaminated as per H.P. procedure 3.1.7.1: </td> <td> <u>IF</u> individual is found <u>NOT</u> to be contaminated, <u>GO TO</u> Step <u>13</u>. </td> </tr> </table>			<u>IF</u> an individual is injured and requiring transportation to offsite hospital, determined to be contaminated as per H.P. procedure 3.1.7.1:	<u>IF</u> individual is found <u>NOT</u> to be contaminated, <u>GO TO</u> Step <u>13</u> .
<u>IF</u> an individual is injured and requiring transportation to offsite hospital, determined to be contaminated as per H.P. procedure 3.1.7.1:	<u>IF</u> individual is found <u>NOT</u> to be contaminated, <u>GO TO</u> Step <u>13</u> .			

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.02	RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	03
		PAGE 11 of 16

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12.	(CONTINUED)	
	a) Review personnel surveys from H.P. procedure 3.1.7.1	
	b) Insure decontamination prior to transportation, is <u>not</u> practical	
	c) Inform Radiological Assessment Director of need to transport contaminated personnel	
	d) Activate EPIP-4.20, <u>Health Physics Actions for Transport- ation of Contaminated Injured Individual</u>	
	1) Select a technician to accompany victim	
	2) Supply technician with copy of EPIP-4.20, <u>Health Physics Actions for Trans- portation of Contaminated Injured Individual</u>	
	3) Supply technician with portable survey instru- ment(s)	
	<u>NOTE:</u> Upon arrival of ambulance dispatch a technician to issue dosimetry	
	e) Inform Radiological Assess- ment Director upon departure of ambulance	

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03 <hr/> PAGE 12 of 16
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
13.	EVACUATION MONITORING <p><u>NOTE</u>: <u>IF</u> evacuation alarm sounds without prior notification of pending evacuation, <u>GO TO</u> substep <u>c</u> of this step.</p> <p><u>IF</u> informed by the Radiological Assessment Director of a pending evacuation:</p> <ul style="list-style-type: none"> a) Consider dispatching onsite monitoring team to the parking lot(s) to determine radiation and contamination levels b) Report results of survey to the Radiological Assessment Director c) Activate EPIP-4.21, <u>Evacuation and Remote Assembly Area Monitoring</u> d) Assist in obtaining transportation of monitoring team <u>or</u> arrange transportation with security e) Inform Radiological Assessment Director when team is dispatched 	<p><u>IF</u> evacuation of the station is not eminent, <u>GO TO</u> Step <u>14</u>.</p>
14.	POST ACCIDENT SAMPLING <ul style="list-style-type: none"> a) When notified by Radiological Assessment Director of the need for a post accident containment and/or reactor coolant: 	<ul style="list-style-type: none"> a) <u>IF</u> post accident sampling of containment air and/or Reactor Coolant <u>NOT</u> required, <u>GO TO</u> Step <u>15</u>.

NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 13 of 16

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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14. (CONTINUED)

- 1) Perform in-plant survey to determine dose rate at sample station
- 2) Inform Radiological Assessment Director results of survey
- 3) Initiate preparation of RWP
- 4) Activate EPIP-4.22, Post Accident Sampling of Containment Air and/or EPIP-4.23, Post Accident Sampling of Reactor Coolant
- 5) Activate EPIP-4.25, liquid effluent sampling during an emergency as necessary.
- 6) Supply Health Physics coverage during sampling and sample preparation

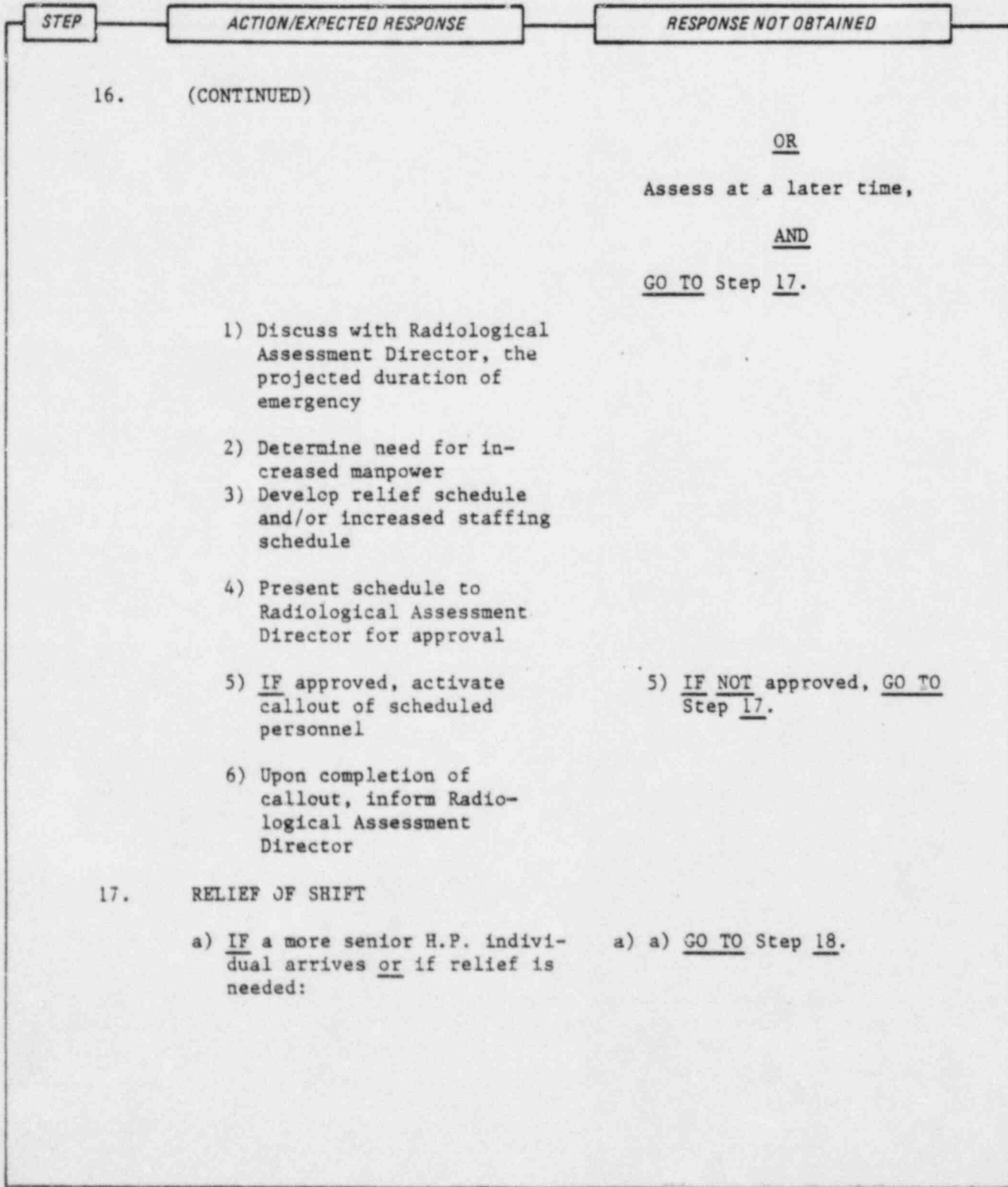
15. SAMPLE ANALYSIS

- | | |
|--|---|
| <ol style="list-style-type: none"> a) Upon receipt of sample analysis data from effluent sampling, or offsite monitoring, relay the information immediately to the Radiological Assessment Director | <ol style="list-style-type: none"> a) <u>IF</u> not sample analysis received, <u>GO TO</u> Step <u>16</u>. |
|--|---|

16. ASSESS MANPOWER

- | | |
|---|---|
| <ol style="list-style-type: none"> a) When time allows, determine need for relief shift and/or an increase in manpower | <ol style="list-style-type: none"> a) <u>IF</u> time is not currently available, assign scheduling to other H.P. personnel |
|---|---|

<p>NUMBER EPIP-4.02</p>	<p>PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE</p>	<p>REVISION 03</p>
		<p>PAGE 14 of 16</p>



NUMBER EPIP-4.02	PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE	REVISION 03
		PAGE 15 of 16

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
17.	(CONTINUED) 1) Brief successor as to the plant conditions and Health Physics actions underway 2) Announce change of position to the Radiological Assessment Director 3) Remain with new supervisor for approximately 30 minutes	
18.	CONTINUE ASSESSMENT a) <u>IF</u> emergency condition <u>still</u> exists: 1) Return to Step <u>5</u> and direct the repetition of surveys and radiological sampling to determine radiological hazards onsite	a) Radiological Assessment Director declares termination of Emergency, <u>GO TO</u> Step <u>19</u> .
19.	TERMINATION OF EMERGENCY a) Inform Health Physics staff as to termination of emergency b) Maintain access control c) Review Recovery actions with Radiological Assessment Director d) Replace all procedures and equipment used during the emergency	

<p>NUMBER EPIP-4.02</p>	<p>PROCEDURE TITLE RADIATION PROTECTION SUPERVISOR CONTROLLING PROCEDURE</p>	<p>REVISION 03</p>
		<p>PAGE 16 of 16</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
20.	<p>ADMINISTRATION</p> <p>a) Forward all completed or partially completed procedures, notes, sample results and surveys to the Radiological Assessment Director</p>	
21.	<p>PROCEDURE COMPLETION:</p> <p>a) Completed By: _____</p> <p style="padding-left: 100px;">Date: _____</p> <p style="padding-left: 100px;">Time: _____</p>	
<p>END</p>		

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

<i>NUMBER</i>	<i>PROCEDURE TITLE</i>	<i>REVISION</i>
EPIP-4.03	DOSE ASSESSMENT CONTROLLING PROCEDURE (With 4 Attachments)	03
		<i>PAGE</i> 1 of 13

PURPOSE

Provide Dose Assessment Personnel guidance in calculating percent of Technical Specifications OR Dose Rates and Projected Dose due to radioactive release.

USER

Dose Assessment Team Leader OR Radiological Assessment Director

ENTRY CONDITIONS

Activation by EPIP-4.01, Radiological Assessment Director Controlling Procedure.

SAFETY RELATED

REVISION RECORD

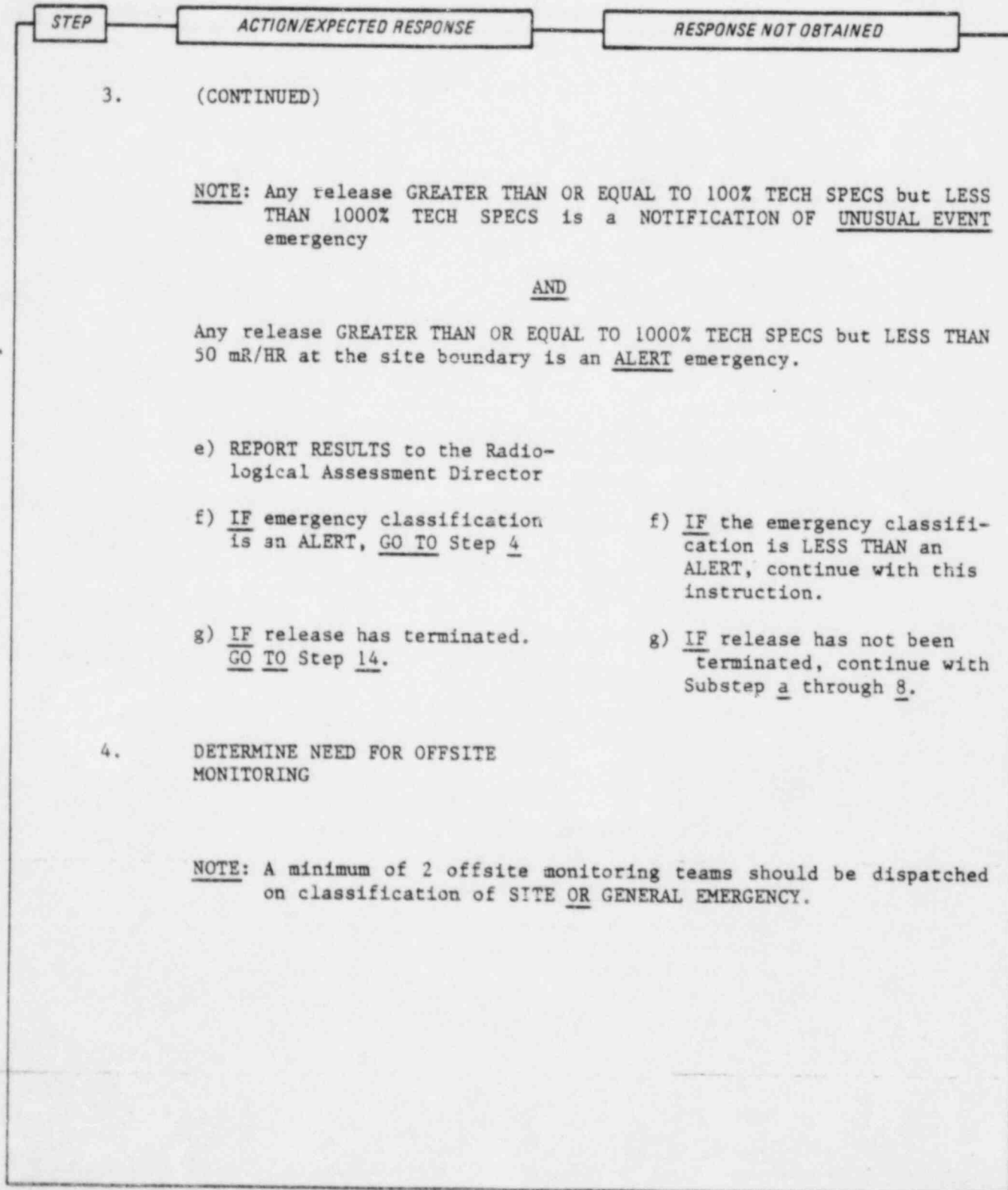
REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<i>APPROVAL RECOMMENDED</i> 	<i>APPROVED</i>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<i>DATE</i> 05-24-83
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NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03
		PAGE 2 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE: a) BY: _____ DATE: _____ TIME: _____	
2.	REQUEST BRIEFING a) Request briefing with the Radiological Assessment Director as to the emergency classifications, initial off-site release calculations and current monitor reading and meteorological data	
3.	DETERMINE EMERGENCY CLASSIFICATION: a) <u>IF the emergency is an UNUSUAL EVENT OR ALERT</u> continue with this instruction b) Obtain a SAMPLE from the effluent pathway c) <u>ACTIVATE EPIP-4.11, Follow-up Offsite Release Assessment</u> d) Obtain from EPIP-4.11, the <u>PERCENT of TECHNICAL SPECIFICATION</u> of the release	a) <u>IF the Emergency is a SITE OR GENERAL GO TO</u> Step 4. b) <u>IF a sample is not available</u> , continue with this instruction using monitor readings to assess the release, until sample results become available.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.03	DOSE ASSESSMENT CONTROLLING PROCEDURE	03
		PAGE 3 of 13



NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03 PAGE 4 of 13
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

a) IF manpower IS available and emergency classification is ALERT OR GREATER

a) IF manpower is NOT available, GO TO Step 6.

AND

Return to this step when manpower is available.

1) Discuss with the Radiological Assessment Director the need for OFFSITE MONITORING

b) IF Offsite Monitoring Teams need to be dispatched, review the following with the Radiological Assessment Director

b) IF Offsite Monitoring Teams NOT required, GO TO Step 6.

1) Meteorological conditions to determine placement of the teams

2) Offsite Dose Projection to determine need for protective measures for Offsite Team Members

5. ASSIGN RADIOPHONE OPERATOR

a) IF Offsite Monitoring Team(s) are to be dispatched, continue with this instruction

a) IF Offsite Teams are NOT to be dispatched, GO TO Step 6.

b) Request from the Radiological Assessment Director to assign an individual to man the radiophone and to assist as the Dose Assessment Team Member

b) IF no individual is available, continue with this instruction, returning to Step 5, when an individual is available.

NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03 PAGE 5 of 13
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

5. (CONTINUED)

- c) Brief individual as to the initial location of the monitoring teams
- d) Assign EPIP-4.12, Offsite Environmental Monitoring Instructions, and EPIP-4.13, Offsite Release Assessment with Environmental Data, to the team member requesting ACTIVATION of the above EPIP's

- 1) Assist, as necessary, establishment of communications and the placement of the teams at desired location

- c) IF no individual is available continue with this instruction.
- d) IF no team member is available ACTIVATE the EPIP's and return to this step

6. OFFSITE DOSE ASSESSMENT

- a) IF OFFSITE DOSE ASSESSMENT is required, ACTIVATE EPIP-4.09, Source Term Assessment, to determine SOURCE TERM

- 1) IF release has occurred continue with this instruction.
- 2) Determine the TIME since the start of the release OR since the previous assessment and convert to seconds
- 3) Perform the following calculation to determine the equivalent curies of I-131 and Xe-133 released

$$\text{TIME (SECONDS)} \times \text{SOURCE TERM (Ci/sec)} = \text{CURIES}$$

- a) IF OFFSITE DOSE ASSESSMENT is NOT required (i.e. emergency did NOT result from actual or potential radiological release) GO TO Step 12.

- 1) If NO release has occurred GO TO Substep b.

NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03
		PAGE 6 of 13

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. (CONTINUED)

4) Log equivalent CURIES on Attachment 1

5) Determine the IODINE to XENON RATIO

AND

Log on Attachment 1

b) ACTIVATE EPIP-4.11, Follow-up Offsite Release Assessment to determine DOSE RATE

NOTE: IF wind shift occurs during offsite releases, re-evaluate offsite releases, and log results, using a new form for Attachment 2, EPIP-4.11.

1) Determine from EPIP-4.11, the DATE, TIME AND STABILITY CLASS used to project the dose rate

2) Determine SITE BOUNDARY DOSE RATE For WHOLE BODY AND THYROID from EPIP-4.11

3) Obtain from the Emergency Communicator, the PRIMARY SECTOR affected by the release

NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03
		PAGE 7 of 13

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. (CONTINUED)

- 4) Determine INTEGRATED DOSE
by multiplying the time
since the start of the
release OR since previous
assessment by the DOSE
RATE:

$$\text{TIME (HOURS)} \times \text{DOSE RATE (mR/HR)} = \underline{\text{INTEGRATED DOSE}}$$

- 5) Determine from Radiological
Assessment Director, the
estimated DURATION OF
RELEASE (HOURS)

- 6) Determine the TOTAL
PROJECTED DOSE:

$$\text{DURATION OF RELEASE} \times \text{DOSE RATE} + \text{INTEGRATED DOSE} = \underline{\text{TOTAL PROJECTED DOSE (mR)}}$$

- 7) Log results on Attachment 2

NOTE: IF Site Boundary Dose Rate is 50 mR/HR Whole Body for 30 minutes OR 500 mR/HR for 2 minutes (OR 5 times these levels for thyroid)

OR

The projected dose is 0.5 to 2.0 REM Whole Body OR 1.0 to 12 REM Thyroid, notify the Radiological Assessment Director that a SITE EMERGENCY condition exists.

NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03
		PAGE 8 of 13

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: IF the Site Boundary dose rate is GREATER THAN OR EQUAL TO 1000 mR/HR Whole Body or 5000 mR/HR Thyroid

OR

The projected dose is GREATER THAN OR EQUAL TO 2 REM Whole Body or 12 REM Thyroid, notify the Radiological Assessment Director that a GENERAL EMERGENCY condition exists.

- | | |
|---|--|
| <p>8) IF monitoring data was used to evaluate offsite dose, update and revise Offsite Dose Assessment when Sample Analysis Data becomes available</p> | <p>8) IF Sample Analysis Data <u>WAS</u> used for Offsite Dose Assessment, continue with this instruction.</p> |
|---|--|

7. DETERMINE OFFSITE DOSE RATE, INTEGRATED AND TOTAL PROJECTED DOSE AT 2, 5 AND 10 MILES

- a) Determine from Step 6 the most current:
- 1) Stability Class
 - 2) Site boundary dose rate for Whole Body and Thyroid
 - 3) Log data on attachment 4
- b) Determine the MULTIPLICATION FACTOR from attachment 3 for distance of 2 miles
- c) Determine DOSE RATE for 2 miles:

SITE BOUNDARY DOSE RATE X MULTIPLICATION FACTOR = DOSE RATE
(mR/HR) (2 MILES)

- d) Log results on Attachment 4

NUMBER	PROCEDURE TITLE	REVISION 03
EPIP-4.03	DOSE ASSESSMENT CONTROLLING PROCEDURE	PAGE 9 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7.	(CONTINUED)	
	e) Repeat Substep <u>b</u> through <u>d</u> for distances of 5 and 10 miles	
	<u>AND</u>	
	Continue with this instruction	
	f) Repeat Substep <u>a</u> through <u>e</u> for the Integrated Dose and for the Total Projected Dose	
8.	DOSE RATE, INTEGRATED AND PROJECTED DOSE AT OTHER DISTANCES.	
	a) <u>IF</u> Dose Rates, Integrated and/or Projected Doses are requested at distances other than 2, 5, or 10 miles, continue with this instruction	
		a) <u>IF</u> data is <u>NOT</u> requested at distances other than 2, 5, or 10 miles, <u>GO TO</u> Step <u>9</u> .
	b) ACTIVATE EPIP-4.10 to determine X/Q for:	
	1) Site Boundary	
	2) Distance other than 2, 5 or 10 miles	
	c) Obtain from Step <u>6</u> the Site Boundary Dose Rate	
	d) Determine Dose Rate for distance of interest:	
	$\text{SITE BOUNDARY DOSE RATE} \times \frac{(X/Q) \text{ (distance of interest)}}{(X/Q) \text{ (site boundary)}} = \text{DOSE RATE (distance of interest)}$	
	e) Log on attachment <u>4</u>	

NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03
		PAGE 10 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8.	(CONTINUED)	
	f) Repeat Substep <u>a</u> through <u>e</u> using Site Boundary Integrated Dose and Total Projected Dose	
9.	RELAY DATA TO RADIOLOGICAL ASSESSMENT DIRECTOR:	
	a) Complete Attachment <u>4</u> and log the DATE, TIME, AND SECTOR AFFECTED at the time of the Offsite Assessment	
	AND	
	Indicate whether Offsite Assessment was done using a monitor reading or Sample Analysis	
	b) Relay the completed attachment <u>4</u> to the Radiological Assessment Director	
10.	COMPARE PROJECTED TO ACTUAL OFFSITE DOSE	
	a) Obtain from the Dose Assessment Team Member the current Offsite Monitoring Data	a) <u>IF</u> Offsite Data is <u>NOT</u> available, <u>GO TO</u> Step <u>11</u> .
	b) Correct the Actual Dose Rates from the Offsite Monitoring Teams for the initial release time:	
	1) Obtain the wind speed from the Radiological Assessment Director (mph)	
	2) Determine the TIME of the actual measurement	
	3) Determine the DISTANCE from the plant where the reading was taken (miles)	

NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03
		PAGE 11 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
10.	<p>(CONTINUED)</p> <p>4) Calculate the INITIAL TIME of RELEASE:</p> $\text{TIME OF MEASUREMENT} - \frac{\text{DISTANCE}}{\text{WIND SPEED}} = \text{INITIAL RELEASE TIME}$ <p>c) Obtain from attachment <u>2</u>, the Projected Dose Rate at the distance and time specified in the above Substep <u>b</u></p> <p>d) Compare dose rates from above Substep <u>a</u> and <u>c</u></p> <p>e) <u>IF</u> data is significantly different,</p> <p>1) Notify the Radiological Assessment Director as to the difference between Actual and Projected Dose Rates</p> <p>2) Determine which set of data is to be used for dose projections</p>	<p>a) <u>IF</u> the Actual and Projected data correlate, <u>GO TO</u> Step <u>11</u>.</p>
11.	<p>ASSESS RELOCATION OF MONITORING TEAM</p> <p>a) <u>IF</u> Monitoring Teams are in the field, review current meteorological data</p> <p>b) Assess the need to relocate monitoring teams</p> <p>c) <u>IF</u> teams are to be relocated inform the Dose Assessment Team Member</p> <p style="text-align: center;"><u>AND</u></p> <p>Assist in relocation of Teams</p>	<p>a) <u>IF</u> Monitoring Teams are not yet dispatched, <u>GO TO</u> Step <u>12</u>.</p> <p>c) <u>IF</u> teams are <u>NOT</u> to be relocated, <u>GO TO</u> Step <u>12</u>.</p>

NUMBER EPIP-4.03	PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE	REVISION 03
		PAGE 12 of 13

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12.	<p>CONTINUE ASSESSMENT:</p> <p>a) <u>IF</u> EOF is <u>NOT</u> manned</p> <p>OR</p> <p><u>IF</u> the radiological release <u>OR</u> potential release has NOT TERMINATED,</p> <p>Continue with Step <u>6</u> through <u>11</u></p>	<p>a) <u>IF</u> EOF is manned <u>GO TO</u> Step <u>13</u>.</p> <p>OR</p> <p><u>IF</u> release <u>OR</u> potential release has terminated, <u>GO TO</u> Step <u>14</u>.</p>
13.	<p>EOF MANNED</p> <p>a) Brief Radiological Assessment Coordinator at the EOF of <u>ALL</u> current offsite Dose Projections and the status and location of Offsite Monitoring Teams</p> <p>b) Inform the Dose Assessment Team Member to instruct the Offsite Monitoring Teams to establish radio contact with the EOF</p> <p>c) Instruct the Dose Assessment Team Member to maintain contact with the EOF relaying the following information received from the Radiological Assessment Director</p> <p>1) Meteorological Data</p> <p>2) Monitoring Data</p> <p>3) Sample Analysis Data</p> <p>d) Report readiness to the Radiological Assessment Director and continue with this instruction.</p>	<p>b) <u>IF</u> radio contact cannot be established maintain contact with monitoring teams, relaying inform- ation from the teams to the EOF</p>

<p>NUMBER EPIP-4.03</p>	<p>PROCEDURE TITLE DOSE ASSESSMENT CONTROLLING PROCEDURE</p>	<p>REVISION 03</p>
		<p>PAGE 13 of 13</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

14. ADMINISTRATION

- a) Gather all procedures, attachments and sample analysis records,

AND

Present them to the Radiological Assessment Director

15. TERMINATE EPIP-4.03

a) Completed By: _____

Date: _____

Time: _____

END

NUMBER EPIP-4.03	ATTACHMENT TITLE X/Q MULTIPLICATION FACTOR	REVISION 03
ATTACHMENT 3		PAGE 1 of 1

STABILITY CLASS							
Distance Miles	A	B	C	D	E	F	G
2	3.59E-1	1.09E-1	2.34E-1	2.71E-1	2.89E-1	3.31E-1	4.14E-1
5	1.58E-1	2.30E-2	4.84E-2	6.78E-2	8.38E-2	9.64E-2	1.36E-1
10	8.15E-2	1.21E-2	1.54E-2	2.49E-2	3.47E-2	3.99E-2	5.64E-2

NUMBER EPIP-4.03	ATTACHMENT TITLE CURRENT OFFSITE RELEASE WORKSHEET	REVISION 03
ATTACHMENT 4		PAGE 1 of 1

DATE _____ TIME _____ SECTOR _____ PROJECTED BY: _____
 _____ BASED UPON OFFSITE MONITORING DATA MONITOR: _____
 _____ BASED UPON ONSITE INSTRUMENTATION SAMPLE: _____

WHOLE BODY

	<u>SITE BOUNDARY</u>	<u>2</u>	<u>5</u>	<u>10</u>	<u>OTHER</u>
DOSE RATE	_____	_____	_____	_____	_____
INTEGRATED DOSE	_____	_____	_____	_____	_____
PROJECTED DOSE	_____	_____	_____	_____	_____

THYROID

	<u>SITE BOUNDARY</u>	<u>2</u>	<u>5</u>	<u>10</u>	<u>OTHER</u>
DOSE RATE	_____	_____	_____	_____	_____
INTEGRATED DOSE	_____	_____	_____	_____	_____
PROJECTED DOSE	_____	_____	_____	_____	_____

$$\text{INTEGRATED DOSE} = \left(\frac{\text{TIME SINCE LAST UPDATE}}{\text{LAST UPDATE}} \times \text{DOSE RATE LAST UPDATE} \right) + \text{PREVIOUS INTEGRATED DOSE}$$

$$\text{PROJECTED DOSE} = \text{INTEGRATED DOSE} + \left(\text{MOST RECENT DOSE RATE} \times \text{ESTIMATED DURATION OF RELEASE} \right)$$

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.04	EMERGENCY PERSONNEL RADIATION EXPOSURE (With 3 Attachments)	03
		PAGE
		1 of 6

PURPOSE

Provide to the Emergency Manager an evaluation of the need for authorization of emergency exposure

USER

Radiological Assessment Director

ENTRY CONDITIONS

Any one of the following conditions exist:

1. Activation by another EPIP.
2. Survey results indicate 10CFR20 quarterly limits may be exceeded.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

B.J. Patton

APPROVED

[Signature]
CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

DATE

05-24-83

NUMBER EPIP-4.04	PROCEDURE TITLE EMERGENCY PERSONNEL RADIATION EXPOSURE	REVISION 03
		PAGE 2 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE: a) Initiated By: _____ Date: _____ Time: _____	
2.	ASSESS NEED FOR EMERGENCY EXPOSURE: The following are guidelines for acceptable authorization of exposure GREATER THAN 10CFR20 quarterly limits (see attachment 1) a) Lifesaving 1) Search, rescue and removal of injured 2) Perform first aid 3) Entry to correct conditions that could, if unrepaired, result in onsite or offsite injury b) Damage repair or corrective actions 1) Save valuable equipment 2) Limit offsite releases	
3.	ASSESS ESTIMATED DOSE: a) Request from Emergency Manager, destination of emergency workers	

NUMBER EPIP-4.04	PROCEDURE TITLE EMERGENCY PERSONNEL RADIATION EXPOSURE	REVISION 03
		PAGE 3 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	(CONTINUED) b) Determine length of exposure time c) Assess dose rate by one of the following: NOTE: Minimize exposure to monitoring personnel while obtaining sufficient data to estimate exposure. 1) Area radiation monitor 2) Survey - Activate EPIP-4.14, <u>Inplant Monitoring</u> d) Total dose = EXPOSURE TIME X DOSE RATE	d) IF total dose estimated LESS THAN <u>3</u> Rem, <u>GO TO Step 12.</u>
4.	INSURE ACTIVATION: a) Notify Emergency Manager to activate EPIP-5.06, <u>Emergency Radiation Exposure Limits</u>	
5.	REVIEW EMERGENCY DOSE LIMITS: a) Review attachment <u>1</u> for emergency exposure limits	
6.	ASSESS NEED FOR IMMEDIATE ACTION: Consider the following prior to authorization: a) Lifesaving actions:	

NUMBER EPIP-4.04	PROCEDURE TITLE EMERGENCY PERSONNEL RADIATION EXPOSURE	REVISION 03
		PAGE 4 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5.	<p>(CONTINUED)</p> <p>1) Attempts to rescue versus total exposure of victim</p> <p>b) Damage repair:</p> <p>1) "Mock-up" or "dry run" prior to entry</p> <p>2) Delay entry to allow for decay and/or ventilation <u>OR</u> establishment of shielding</p>	
6.	<p>RECOMMEND EMERGENCY EXPOSURE:</p> <p>a) Review with Emergency Manager alternatives available</p> <p>b) Insure the individual has <u>NOT</u> received a once in a lifetime exposure</p> <p>c) Submit recommendation to the Emergency Manager</p>	<p>b) <u>IF</u> individual previously received emergency exposure, deny authorization.</p>
7.	<p>PROTECTIVE ACTIONS:</p> <p>a) Entry requires Radiation Work Permit</p>	
	<p><u>NOTE:</u> Emergency Manager may, at his discretion, waive requirements for Radiation Work Permit prior to entry and give verbal authorization.</p>	
	<p>b) Insure workers receive:</p> <p>1) Proper protective clothing</p>	

NUMBER EPIP-4.04	PROCEDURE TITLE EMERGENCY PERSONNEL RADIATION EXPOSURE	REVISION 03
		PAGE 5 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7.	(CONTINUED) 2) Dosimetry capable of measuring expected dose 3) Respiratory protection, if necessary 4) Instrumentation capable of reading radiation levels of up to 1000 R/Hr c) If possible, direct workers to route of entry of lowest exposure NOTE: Unless considered necessary, monitoring personnel should not remain in high exposure area. d) Provide Health Physics coverage	
8.	REVIEW EXPOSURE EFFECTS: a) <u>IF</u> time permits, Review attachment <u>2</u> , <u>Radiation Effects Versus Whole Body Exposure</u> , with volunteers	
9.	EMERGENCY EXPOSURE FORM: a) Complete the emergency worker Radiological Exposure Record on attachment <u>3</u>	

NUMBER EPIP-4.04	PROCEDURE TITLE EMERGENCY PERSONNEL RADIATION EXPOSURE	REVISION 03 PAGE 6 of 6
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p><u>NOTE:</u> IF the authorized emergency exposure, or a large portion of exposure is received, the dose may be considered a once in a life time dose and individual shall be excluded from further emergency exposure.</p>	
10.	<p>FOLLOW UP ASSESSMENT:</p> <p>a) IF individual has received <u>GREATER THAN 25</u> Rem, "recommend" evacuation to MCV for further assessment</p>	
11.	<p>ADMINISTRATION</p> <p>a) Complete attachment <u>3</u></p> <p>b) Forward copy of attachment <u>3</u> to Station Emergency Manager</p> <p>c) Place the original attachment <u>3</u> in individual's dose control file</p>	
12.	<p>RETURN TO CONTROLLING PROCEDURE</p> <p>a) Upon completion of this procedure return to the controlling procedure</p>	
13.	<p>PROCEDURE COMPLETED:</p> <p>a) COMPLETED BY: _____</p> <p>DATE: _____</p> <p>TIME: _____</p>	
		<p style="text-align: center;">END</p>

NUMBER EPIP-4.04	ATTACHMENT TITLE EMERGENCY PERSONNEL RADIATION EXPOSURE	REVISION 03
ATTACHMENT 1	EMERGENCY EXPOSURE LIMITS	PAGE 1 of 1

VEPCO ON-SITE EMERGENCY EXPOSURE LIMITS

<u>CLASSIFICATION</u>	<u>WHOLE BODY (REM)</u>	<u>THYROID (REM)</u>
Damage Repair Activity	25	125
Lifesaving Activity	100	*

* No limit given in extreme case because loss of thyroid may be acceptable to save a life. This may not be necessary if respirators and/or blocking agents are available for rescue personnel.

NRC 10CFR20 QUARTERLY LIMITS

Whole Body	1.25 Rem
	3.00 Rem**
Hands/Feet	18.75 Rem
Skin	7.5 Rem

** IF 5 (N-18) permits

<u>NUMBER</u> EPIP-4.04	<u>ATTACHMENT TITLE</u> EMERGENCY PERSONNEL RADIATION EXPOSURE	<u>REVISION</u> 03
<u>ATTACHMENT</u> 2	RADIATION EFFECTS VERSUS WHOLE BODY EXPOSURE	<u>PAGE</u> 1 of 1

<u>EXPOSURE</u>	<u>EFFECTS</u>
0 rem to 20 rem	no <u>measurable</u> effects
20 rem to 50 rem	minor blood changes, cellular damage almost completely repaired.
50 rem to 100 rem	further blood changes, loss of appetite, fatigue, no disability.
100 rem to 300 rem	illness occurs: nausea, vomiting, diarrhea, skin reddening, loss of hair, complete recovery in most cases, although a few fatalities.
300 rem to 400 rem	severe illness.
450 rem	about 50% fatalities in 30 days.
600 rem	Virtually all exposed individuals will die.

NOTE: The effects shown above are based upon:

1. An acute exposure to the entire body.
2. An acute exposure to an entire population.
3. No medical treatment for the victims.

NUMBER EPIP-4.04	ATTACHMENT TITLE EMERGENCY PERSONNEL RADIATION EXPOSURE EMERGENCY WORKER RADIOLOGICAL EXPOSURE RECORD	REVISION 03
ATTACHMENT 3		PAGE 1 of 1

NAME: _____ AGE: _____ YEARS
 Last First Mid. Init.

Soc. Sec. No.: _____ : Current Quarterly Exposure: _____ rem

Authorized Emergency Exposure: _____ rem

Authorized by (Emergency Manager): Name: _____ at _____ hours

On Date: _____ 19 ____.

SELF-READING DOSIMETER

RANGE ROENTGEN	STARTING READING		STOP READING		DOSE R	INTEGRATED DOSE R	BY INIT.
	R	TIME	DATE	R			

TLD BADGE NO. _____ NO. _____

CHECK () ISSUE	READ	TIME	DATE	DOSE REM	INTEGRATED DOSE/REM	BY INIT.

REMARKS: _____

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.06	PERSONNEL MONITORING AND DECONTAMINATION (With 2 Attachments)	03
		PAGE 1 of 6

<p>PURPOSE</p> <p>Provide guidance for decontamination of personnel.</p>
<p>USER</p> <p>Health Physics Technician</p>
<p>ENTRY CONDITIONS</p> <p>1. Activated by another EPIP.</p>

SAFETY RELATED

REVISION RECORD		
REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> <p><i>S.J. Paxton</i></p>	<p>APPROVED</p> <p><i>[Signature]</i></p> <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
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NUMBER EPIP-4.06	PROCEDURE TITLE PERSONNEL MONITORING AND DECONTAMINATION	REVISION 03
		PAGE 2 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE: a) BY: _____ DATE: _____ TIME: _____	
2.	OBTAIN MONITORING EQUIPMENT: a) Obtain an RM-14, with an H.P. 210 probe, from the Health Physics instrument locker and proceed immediately to the Personnel Change Area 1) <u>IF</u> the area is habitable, all contaminated individuals will be deconned there 2) <u>IF</u> a large number of individuals are suspected of being contaminated, the laundry should be used to handle the overflow	1) <u>IF</u> area is uninhabitable, request assistance from the Radiation Protection Supervisor for relocation <u>AND</u> Have contaminated individual remove contaminated clothing and don clean protective clothing (paper suit, gloves, booties, etc.) to minimize spread of contamination.
3.	CONTAMINATED PERSONNEL WITH INJURIES: a) <u>IF</u> contaminated individual is injured and requires first aid:	a) <u>IF</u> contaminated individual is <u>NOT</u> injured, <u>GO TO</u> Step 4.

NUMBER EPIP-4.06	PROCEDURE TITLE PERSONNEL MONITORING AND DECONTAMINATION	REVISION 03
		PAGE 3 of 6

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3. (CONTINUED)

- 1) Perform follow-up first-aid and decontamination in the H.P. laundry facility, if appropriate
- 2) Perform as much decontamination as medical status permits

4. PERFORM SURVEY:

- a) Perform initial survey, documenting results on Attachments 1 and 2
 - 1) Pay particular attention to the nose and mouth area to determine possible internal contamination

b) IF internal contamination is suspected, note on Attachment 1

a) IF internal contamination is NOT suspected, GO TO Step 5.

- 1) Have individual clean nose with wet cotton swabs
- 2) Have individual blow nose frequently
- 3) Record swab reading on Attachment 1

NOTE: Cease decontamination if skin becomes reddened OR bleeding.

NOTE: Obtain permission from Radiation Protection Supervisor to apply potassium permanganate.

NUMBER EPIP-4.06	PROCEDURE TITLE PERSONNEL MONITORING AND DECONTAMINATION	REVISION 03
		PAGE 4 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5.	DECONTAMINATE: a) REMOVE contaminated CLOTHING from individual b) <u>IF</u> CONTAMINATION problem is WIDESPREAD: 1) Shower using soap and water, keeping radioactive material away from body openings 2) Dry thoroughly, placing towel in plastic bag or contaminated material barrel 3) Repeat survey and log data on Attachment <u>1</u> 4) <u>IF</u> contamination still exists repeat showering and surveying, recording survey data on Attachment <u>1</u> 5) <u>IF</u> contamination still exists, select most highly contaminated areas and start decontamination for localized areas c) If contaminated area is <u>LOCALIZED</u> , isolate the area and perform the following actions. Survey and record data on Attachment <u>1</u> after each step 1) Clean using soap and water 2) Apply abrasive soap and water	4) <u>GO TO</u> Step <u>6</u> 5) <u>GO TO</u> Step <u>6</u> c) <u>GO TO</u> Substep <u>d</u> .

NUMBER EPIP-4.06	PROCEDURE TITLE PERSONNEL MONITORING AND DECONTAMINATION	REVISION 03
		PAGE 5 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5.	(CONTINUED)	
	3) Apply a mixture of 50% CORNMEAL and 50% DETERGENT PASTE and scrub with brush	
	4) As a last resort, apply potassium permanganate solution, rinse and apply freshly prepared sodium bisulfite solution	
	d) <u>IF</u> contamination is found in EYES or OPEN WOUND:	d) <u>GO TO</u> Substep <u>e.</u>
	1) Flush copiously with water	
	2) Record contamination data on Attachment <u>1</u>	
	3) Notify Radiation Protection Supervisor	
	e) If contamination is found in hair:	e) <u>GO TO</u> Step <u>6</u>
	1) Shampoo, isolating face and shoulders	
	2) Consider cutting or shaving the affected area if contamination cannot be removed	
6.	CONTAMINATION LIMITS:	
	a) <u>IF</u> individuals are decontaminated to as low as reasonably achievable, below 100 CPM above background, they may be released.	a) <u>IF</u> individual cannot be decontaminated to background, contact Radiation Protection Supervisor prior to releasing the individual.

<p>NUMBER EPIP-4.06</p>	<p>PROCEDURE TITLE PERSONNEL MONITORING AND DECONTAMINATION</p>	<p>REVISION 03</p>
		<p>PAGE 6 of 6</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6.	(CONTINUED)	<p>1) Individual may be released if contamination is found to be fixed (< 0.1 mR/hr) and follow-up decontamination and/or dose evaluation is made. Contact the Radiation Protection Supervisor prior to releasing the individual.</p>
7.	<p>INTERNAL CONTAMINATION: a) Individuals suspected of internal contamination should be evaluated following normal station H.P. procedure <u>3.1.3.4, Whole Body Counter Operation</u></p>	<p>a) <u>IF</u> whole body counter is inoperable, use Surry Power Station counter.</p>
8.	<p>ADMINISTRATION: a) Return all completed survey results to the Radiation Protection Supervisor</p>	
9.	<p>PROCEDURE COMPLETION: a) COMPLETED BY: _____ DATE: _____ TIME: _____</p>	
<p>END</p>		

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.06	PERSONNEL DECONTAMINATION RECORD	03
ATTACHMENT		PAGE
1		1 of 1

1. Individual Contaminated: _____
2. TLD#: _____ Date: _____ TIME: _____ RWP# _____
3. Contamination Occurred in (Area): _____
4. While Involved in (Type Work): _____

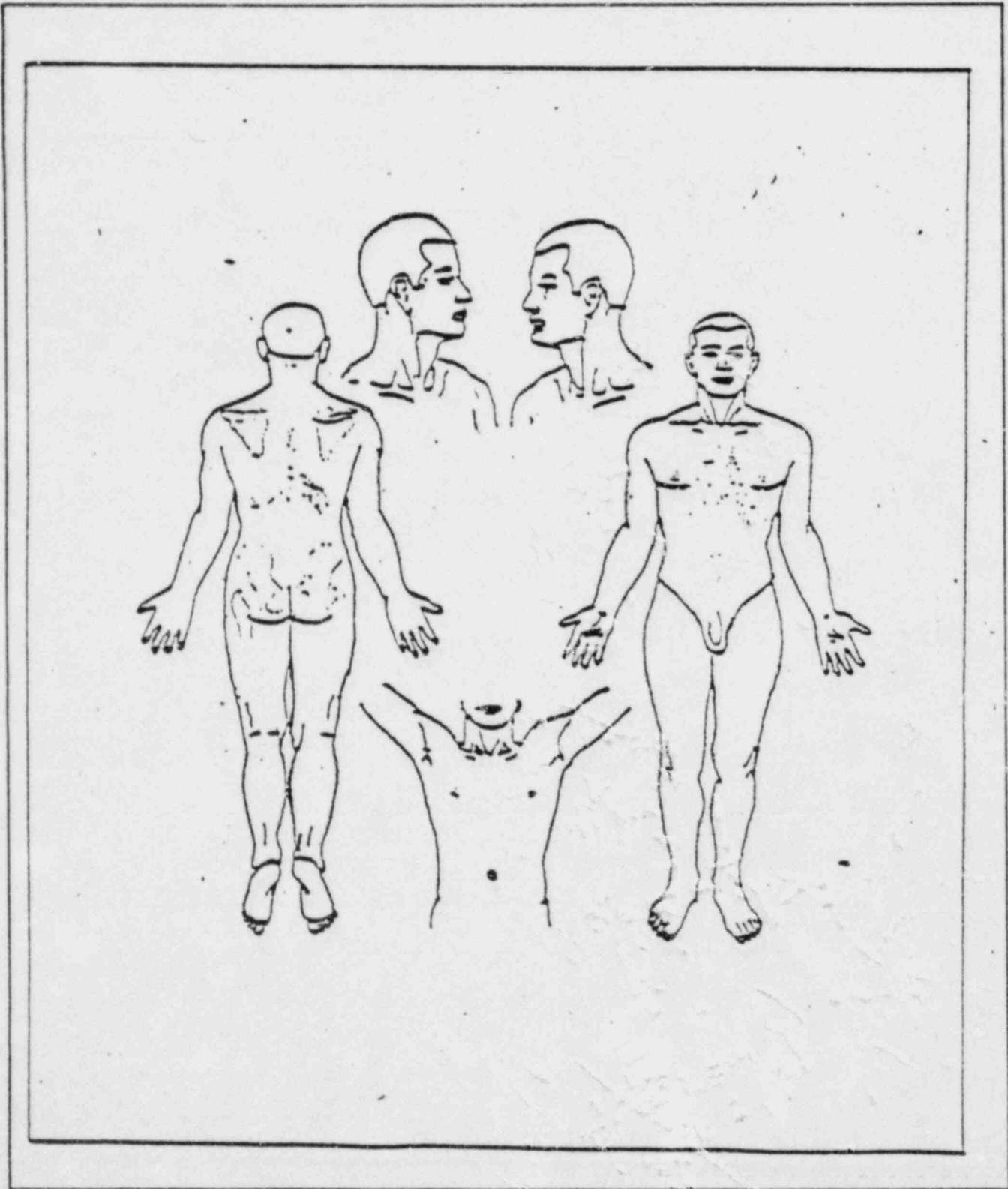
5. Personal Clothing or Equipment Contaminated: YES _____ NO _____
6. Items (List): _____
7. Disposition of above listed items: _____
8. If internal contamination is suspected, the individual should be given a whole body count.
9. Internally Contaminated? YES _____ NO _____
IF YES NOTIFY RADIATION PROTECTION SUPERVISOR IMMEDIATELY!
10. Body Areas Externally Contaminated: _____
11. Decontamination:

TIME	SKIN AREA	SURVEY INSTRUMENT & PROBE	READING	DECON AGENT	INITIALS

Health Physics Remarks: _____

Health Physics Clearance and Signoff By _____ Date _____

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.06	PERSONNEL SURVEY WORKSHEET	03
ATTACHMENT		PAGE
2		1 of 1



VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER</p> <p>EPIP-4.07</p>	<p>PROCEDURE TITLE</p> <p>PROTECTIVE MEASURES</p> <p>(With 5 Attachments)</p>	<p>REVISION</p> <p>03</p> <p>PAGE</p> <p>1 of 7</p>
--------------------------------	---	---

PURPOSE

Supply guidance to Radiological Assessment Director to promptly assess projected doses to population of risk and to recommend protective actions to the Emergency Manager.

USER

Radiological Assessment Director or Senior Health Physics Personnel Onsite.

ENTRY CONDITIONS

Any of the following:

1) Activation by EPIP-4.01, Radiological Assessment Director Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
---	---	-----------------------------

NUMBER EPIP-4.07	PROCEDURE TITLE PROTECTIVE MEASURES	REVISION 03
		PAGE 2 of 7

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:

- a) Initiated By: _____
 Date: _____
 Time: _____

2. PROTECTIVE ACTION GUIDELINES FOR INITIAL ASSESSMENT OR FOR CONTINUOUS RELEASE

- a) IF this is an INITIAL ASSESSMENT

OR

IF the radioactive release is a CONTINUOUS RELEASE

Determine the distance, from EPIP-4.03, Dose Assessment Controlling Procedure, at which the projected dose exceeds:

- 1) 2.0 REM Whole Body OR 12.0 REM Thyroid

AND/OR

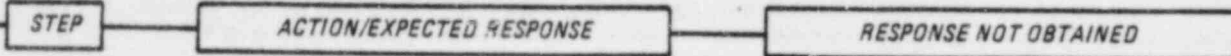
- 2) 0.5 REM Whole Body OR 1.0 REM Thyroid

- 1) IF projected dose is LESS THAN 2.0 Rem Whole body OR 12.0 Rem Thyroid, continue with this instruction.

- 2) IF projected dose is LESS THAN 0.5 Rem Whole Body OR 1.0 Rem Thyroid, recommend offsite Protective Actions, GO TO Step 5.

- b) Review PROTECTIVE ACTION GUIDELINES in Attachment 1
- c) Determine the affected sector from the Emergency Communicator
- 1) Determine the current wind direction

NUMBER EPIP-4.07	PROCEDURE TITLE PROTECTIVE MEASURES	REVISION 03
		PAGE 3 of 7



2. (CONTINUED)

NOTE: Wind direction is given in the direction the wind is coming FROM.

- 2) Affected sector is 180° from the wind direction
- 3) Review Sector Map in Attachment 5
- d) Recommend PROTECTIVE ACTIONS for PRIMARY SECTOR (Substep c) AND the two adjacent sectors
- e) GO TO Step 5

3. PROTECTIVE ACTION GUIDELINES FOR A PUFF RELEASE

- a) IF the release is a PUFF release
- a) GO TO Step 5

OR

Radiological release is probable, but has NOT yet occurred, continue with this instruction.

- b) Review EPIP-4.03, Dose Assessment Controlling Procedure
- c) IF a review of data from Sub-step b indicates OFFSITE EXPOSURE to be GREATER THAN OR EQUAL TO 0.5 REM Whole Body
- c) GO TO Step 5

<p>NUMBER EPIP-4.07</p>	<p>PROCEDURE TITLE PROTECTIVE MEASURES</p>	<p>REVISION 03</p>
		<p>PAGE 4 of 7</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	<p>(CONTINUED)</p> <p style="text-align: center;"><u>OR</u></p> <p>1.0 REM Thyroid</p> <p>Continue with this instruction</p>	
4.	<p>CALCULATE NEED FOR EVACUATION OR SHELTERING</p>	
	<p>a) Determine need for EVACUATION <u>OR SHELTERING</u> based on <u>WHOLE</u> <u>BODY EXPOSURE</u></p>	
	<p>1) Complete Attachment <u>3</u></p>	
	<p>2) Using information from Attachment <u>3</u> determine the PROTECTIVE ACTIONS to be recommended from the following:</p>	
	<p><u>IF</u></p>	<p><u>THEN</u></p>
	<p>1. <u>Projected dose</u> LESS THAN <u>0.5</u> rem</p>	<p>1. No action</p>
	<p>2. <u>Sheltering dose</u> LESS THAN <u>2.0</u> rem</p>	<p>2. Shelter</p>
	<p>3. <u>Sheltering dose</u> GREATER THAN OR EQUAL TO <u>2.0</u> rem, and <u>Evacuation dose</u> LESS THAN <u>Sheltering dose</u></p>	<p>3. Evacuate</p>
	<p>4. <u>Sheltering dose</u> GREATER THAN OR EQUAL TO <u>2.0</u> rem, and <u>Evacuation dose</u> GREAT- ER THAN <u>OR</u> equal to Shelt- ering dose</p>	<p>4. Shelter</p>

NUMBER EPIP-4.07	PROCEDURE TITLE PROTECTIVE MEASURES	REVISION 03
		PAGE 5 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	(CONTINUED)	
	b) Determine EVACUATION OR SHELTERING based on <u>THYROID</u> <u>EXPOSURE</u>	
	1) Complete Attachment <u>3</u> using <u>THYROID EXPOSURE RATE</u>	
	<u>AND</u>	
	0.65 for STRUCTURE SHELTERING FACTOR	
	2) Using information from Attachment <u>3</u> determine PROTECTIVE ACTIONS to be RECOMMENDED from the following:	
	<u>IF</u>	<u>THEN</u>
	1. Projected thyroid dose LESS THAN <u>1.0</u> rem	1. No action
	2. Sheltering dose GREATER THAN OR EQUAL TO <u>1.0</u> rem but LESS THAN <u>12</u> rem	2. Shelter
	3. Sheltering dose GREATER than OR EQUAL TO <u>12</u> rem and evacuation dose LESS THAN sheltering dose	3. Evacuate
	4. Sheltering dose GREATER THAN OR EQUAL TO <u>12</u> rem and evacuation dose GREAT- ER THAN <u>OR</u> equal to shelt- ering dose	4. Shelter

NUMBER EPIP-4.07	PROCEDURE TITLE PROTECTIVE MEASURES	REVISION 03
		PAGE 6 of 7

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

5. DETERMINE NEED FOR PROTECTIVE ACTION ONSITE

a) Review survey and air sampling data with the Radiation Protection Supervisor

b) IF the whole body dose rate exceeds 1 REM/HR in occupied areas of the plant

b) IF onsite Protective Action Guidelines are NOT exceeded, recommend evacuation to low radiation area

OR

For thyroid exposure recommend sheltering in closed buildings.

OR

IF projected thyroid exposure may exceed 5 REM (see attachment 2):

Recommend evacuation of onsite personnel NOT required for emergency response

6. BRIEF EMERGENCY MANAGER

a) Provide RECOMMENDATIONS from Step 2 OR Step 5 to the Emergency Manager

b) Review with the Emergency Manager, assumptions made in Step 2 OR Step 5. Answer any questions concerning calculations

7. RETURN TO CONTROLLING PROCEDURE

a) Upon completion of this procedure, RETURN to EPIP-4.01, Radiological Assessment Director Controlling Procedure

<i>NUMBER</i> EPIP-4.07	<i>PROCEDURE TITLE</i> PROTECTIVE MEASURES	<i>REVISION</i> 03
		<i>PAGE</i> 7 of 7

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

8. PROCEDURE COMPLETION

a) COMPLETED BY: _____

DATE: _____

TIME: _____

END

NUMBER EPIP-4.07	ATTACHMENT TITLE STATE OF VIRGINIA	REVISION 03
ATTACHMENT 1	PROTECTIVE ACTION GUIDELINES	PAGE 1 of 1

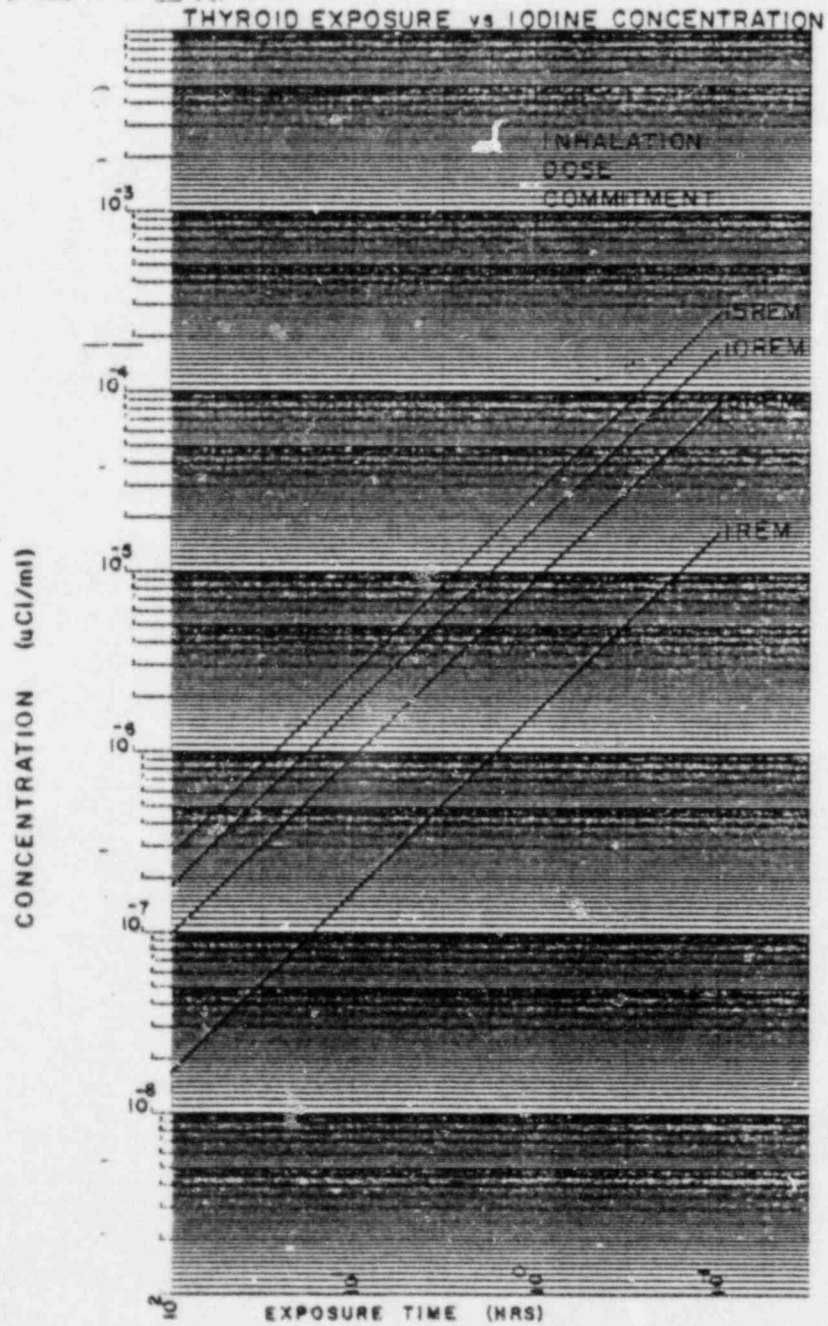
OFFSITE:

PROJECTED DOSE	PROTECTIVE ACTIONS
Less than <u>0.5</u> rem whole body <u>OR</u> Less than <u>1.0</u> rem thyroid	No protective action necessary <u>IF</u> radiological situation is unstable, consider recommendation of citizen alert.
<u>0.5 - 2.0</u> rem whole body <u>OR</u> <u>1.0 - 12.0</u> rem thyroid	Recommend sheltering of public
Greater than or equal to <u>2.0</u> rem whole body <u>OR</u> <u>12</u> rem thyroid	Recommend evacuation of affected sectors

ONSITE:

PROJECTED DOSE	PROTECTIVE ACTIONS
Less than 1.0 rem whole body <u>OR</u> Less than 5.0 rem thyroid	Recommend sheltering
Greater than or equal to 1.0 rem whole body <u>OR</u> Greater than 5.0 rem thyroid	Recommend site evacuation

<p>NUMBER EPIP-4.07</p>	<p>ATTACHMENT TITLE THYROID EXPOSURE VERSUS IODINE CONCENTRATION</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 1 of 1</p>



NUMBER EPIP-4.07	ATTACHMENT TITLE EVAUCATION VERSUS SHELTER	REVISION 03
ATTACHMENT 3	WORKSHEET	PAGE 1 of 2

1. Determine approximate DISTANCE to POINT OF INTEREST _____ MILES

NOTE: Use furthest distance in which protective action guidelines for sheltering have been exceeded.

2. Calculate DOSE RATE at distance or point of interest _____ mR/HR

3. Estimation of RELEASE DURATION _____ HOURS

4. PROJECTED DOSE = $\frac{\text{DOSE RATE X RELEASE DURATION}}{1000}$ _____ REM

5. WIND SPEED _____ MPH

6. PLUME TRAVEL TIME = $\frac{\text{DISTANCE (miles)}}{\text{WIND SPEED (mph)}}$ _____ HOURS

7. Time SINCE OR UNTIL, BEGINNING OF RELEASE

a) IF RELEASE HAS BEGUN:
TIME RELEASE HAS BEEN IN PROGRESS _____ HOURS

b) IF RELEASE WILL BEGIN:
RELEASE WILL START IN _____ HOURS

8. TIME UNTIL EXPOSURE BEGINS:

a) IF RELEASE HAS BEGUN:
Item 6 - Item 7a _____ HOURS

b) IF RELEASE WILL BEGIN:
Item 6 + Item 7b _____ HOURS

9. EVACUATION WEATHER CONDITIONS:

NORMAL _____ ADVERSE _____

10. Use distance and weather conditions to obtain ESTIMATED EVACUATION TIME from Attachment 4 _____ HOURS

NUMBER EPIP-4.07	ATTACHMENT TITLE EVAUCATION VERSUS SHELTER	REVISION 03
ATTACHMENT 3		PAGE 2 of 2

11. EXPOSURE TIME

Evacuation Time - Time until exposure begins _____ HOURS

NOTE: IF time until exposure begins is longer than Evacuation time, enter ZERO HOURS

12. EVACUATION EXPOSURE PERIOD:

Smaller of either exposure time or Release Duration Time _____ HOURS

13. PROJECTED DOSE _____ REM

14. EVACUATION DOSE:

$$\frac{\text{EVACUATION EXPOSURE PERIOD X DOSE RATE}}{1000}$$
 _____ REM

15. SHELTERING DOSE:

PROJECTED DOSE x STRUCTURE SHIELDING FACTOR* _____ REM

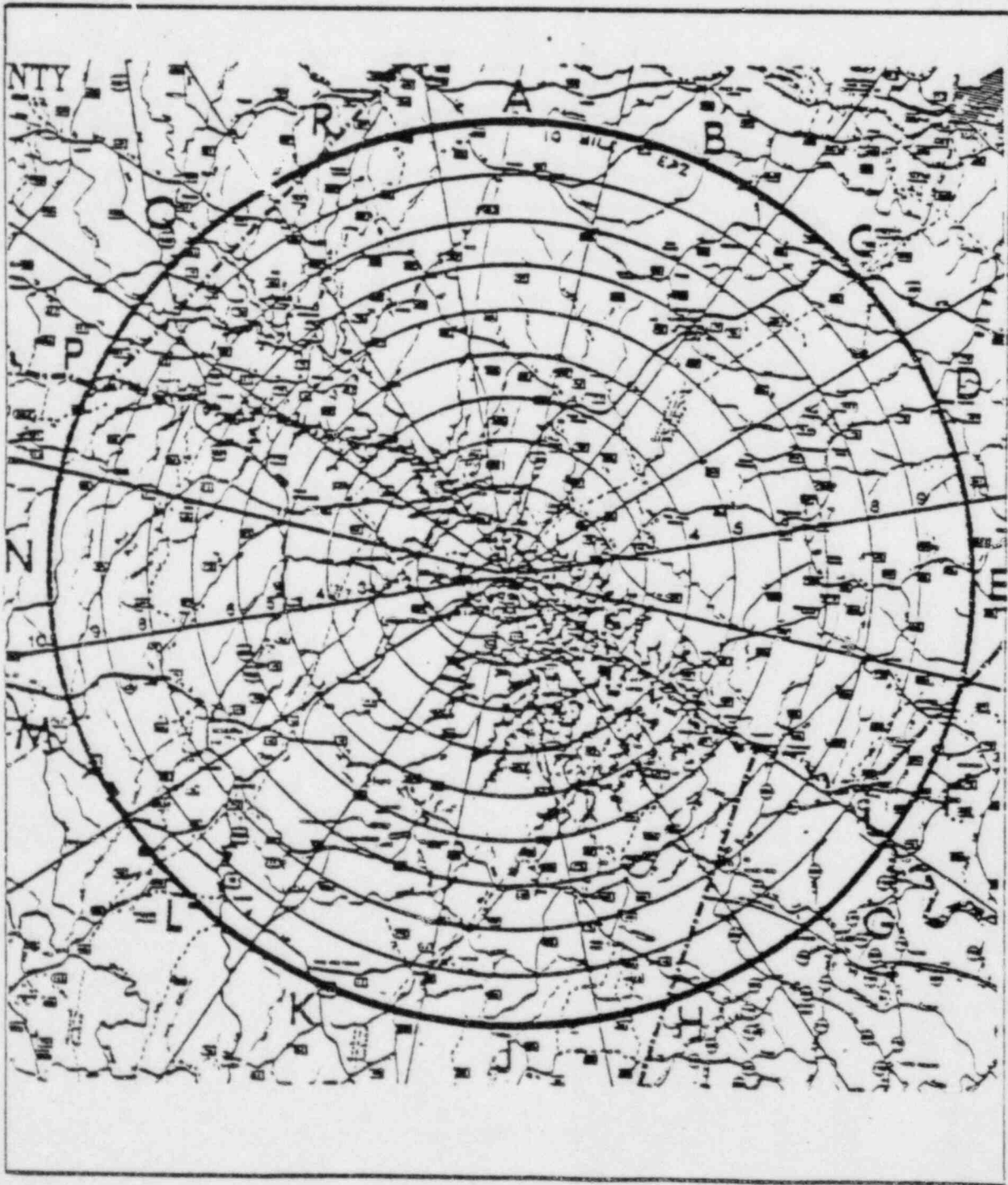
*NOTE: FOR WHOLE BODY = $\frac{0.9}{1000}$
 THYROID = $\frac{0.65}{1000}$

END

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.07	EVACUATION TIMES FOR NORTH ANNA POWER STATION	03
ATTA: MENT		PAGE
4		1 of 1

<u>AREA</u>	<u>TIME</u>	
	EVACUATION TIME NORMAL CONDITION	EVACUATION TIME ADVERSE CONDITION
Total Area Within 2-Miles	2:15	2:15
WITHIN 2-5 MILES		
Louisa Co.	2:15	2:15
Spotsylvania Co.	2:15	2:15
WITHIN 5-10 MILES		
Louisa Co.	2:45	3:30
Orange Co.	2:15	2:15
Hanover Co.	2:15	2:15
Caroline Co.	2:15	2:15
Spotsylvania Co.	2:45	3:30

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.07	NORTH ANNA SECTOR MAP	03
ATTACHMENT		PAGE
5		1 of 1



VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.08	INITIAL OFFSITE RELEASE ASSESSMENT (With 8 Attachments)	03
		PAGE 1 of 11

PURPOSE

Initially assess consequences of offsite releases or potential offsite releases.

USER

Radiological Assessment Director OR Members of Dose Assessment Team.

ENTRY CONDITIONS

1. Activation from another EPIP.

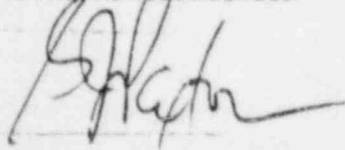
OR
2. Entry from other EPIPs


OR
3. Direction of the Station Emergency Manager.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

APPROVED


CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

DATE

05-24-83

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 2 of 11

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:

a) BY: _____

DATE: _____

TIME: _____

2. DETERMINE EMERGENCY CLASSIFICATION:

a) IF the Emergency is an Unusual Event OR Alert, continue with this instruction

a) IF a Site OR General Emergency, GO TO Step 4.

3. DETERMINE PERCENT TECHNICAL SPECIFICATION:

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

a) Obtain from operations the number of the monitor in alarm and log on Attachment 1

b) Request from the Emergency Manager, placement of an individual to observe monitor in alarm and report increase or decrease in readings.

c) Obtain HIGHEST CPM, above background, of monitor in Substep a and log on Attachment 1

c) IF monitor is offscale OR not functional, GO TO Step 4.

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 3 of 11

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3. (CONTINUED)

d) Determine release rate:

1) Gaseous

_____ CFM

2) Liquid - request the
number of circulating
water pumps running

_____1) Continue with this
instruction.2) GO TO Substep e.

NOTE: IF more than one monitor is in alarm, the TOTAL percent Tech Spec will be the SUM of the percent from EACH monitor. DO NOT sum per cent from liquid monitors and gaseous monitors together. Liquid releases must be totaled separately from gaseous releases

e) Determine the percent Technical Specification from the the appropriate FIGURE in Attachment 2, and log on Attachment 1

e) IF monitor of interest is NOT listed in the attachments, GO TO Step 8, for follow-up assessment.

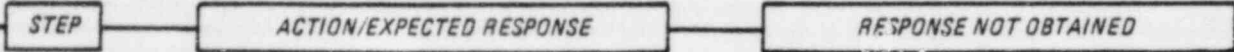
NOTE: IF the percent of technical specification is GREATER THAN OR EQUAL TO 100% but LESS THAN 1000%, UNUSUAL EVENT emergency condition exists.

OR

IF percent technical specifications is GREATER THAN OR EQUAL TO 1000% but LESS THAN 50 mR/HR, ALERT emergency condition exists.

f) Report results to the
Emergency Manager

<p>NUMBER EPIP-4.08</p>	<p>PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT</p>	<p>REVISION 03</p>
		<p>PAGE 4 of 11</p>



3. (CONTINUED)

g) IF the percent of Tech Specs is GREATER THAN OR EQUAL TO 1000%

g) IF the percent Tech Specs are LESS THAN 1000% GO TO Step 8.

OR

IF site boundary DOSE RATE is requested, continue with this instruction

4. DETERMINE SITE BOUNDARY WHOLE BODY DOSE RATE:

a) Request from the Emergency Manager, placement of an individual to observe the monitor in alarm and report increase or decrease in readings

b) IF release path through PROCESS VENT, VENT VENT OR AIR EJECTOR

b) IF NORMAL RANGE MONITORS are OFFSCALE, GO TO Substep c.

AND

NORMAL RANGE monitors are ONSCALE:

NOTE: IF AIR EJECTOR is diverted to containment, NO release from this pathway should be considered.

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 5 of 11

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

- 1) Obtain the NUMBER of the MONITOR OF INTEREST and log on Attachment 3:

VENT VENT A (VG-104)

OR

VENT VENT B (VG-113)

OR

PROCESS VENT (GW-102)

OR

AIR EJECTOR (SV-121,221)

- 2) Obtain the CPM, above background, for MONITOR OF INTEREST

_____ CPM

- 3) Obtain, from the Emergency Communicator the STABILITY CLASS AND WIND SPEED

_____ STABILITY CLASS

_____ WIND SPEED

- 4) Obtain CONVERSION FACTOR from Attachment 6, using the Monitor of Interest and Stability Class

_____ CONVERSION FACTOR

NUMBER EPIF-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03 PAGE 6 of 11
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

- 5) Determine SITE BOUNDARY DOSE RATE:

$$\frac{\text{CPM X CONVERSION FACTOR}}{\text{WIND SPEED}} = \frac{\text{mR}}{\text{HR}}$$

- 6) Log mR/HR on Attachment 3
 7) GO TO Step 5

- c) IF the release path is through the PROCESS VENT OR VENT VENT and normal range monitors are OFFSCALE and the high range monitoring are onscale:

- c) IF HIGH RANGE MONITORS are NOT onscale, recommend emergency classification of UNUSUAL EVENT and GO TO Step 8.

OR

IF release is through the MAIN STEAM SYSTEM GO TO Substep d.

- 1) Obtain the NUMBER of the MONITOR OF INTEREST and log on Attachment 3

PROCESS VENT (RM-GW-173)

OR

VENT VENT A (RM-VG-174)

OR

VENT VENT B (RM-VG-175)

- 2) Obtain from operation the mR/HR of monitor of interest

_____ mR/HR

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 7 of 11

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

- 3) Convert mR/HR to $\mu\text{Ci}/\text{cc}$
using Attachment 5

_____ $\mu\text{Ci}/\text{cc}$

- 4) Obtain from the Emergency
Communicator the STABILITY
CLASS and WIND SPEED

_____ STABILITY CLASS

_____ WIND SPEED

- 5) Using Stability Class and
Monitor of Interest obtain
the CONVERSION FACTOR from
Attachment 6

_____ CONVERSION FACTOR

- 6) Determine SITE BOUNDARY
DOSE RATE

$$\frac{\mu\text{Ci}/\text{cc} \times \text{CONVERSION FACTOR}}{\text{WIND SPEED}} = \frac{\text{mR}}{\text{HR}}$$

- 7) Log mR/HR on Attachment 3

- 8) GO TO Step 5

- d) IF release path or potential
release path is through the
STEAM SAFETY RELIEF VALVES OR
through the AUXILIARY FEED-
WATER PUMP TURBINE EXHAUST
(AFPT), continue with this
instruction

- c) GO TO Step 5

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 8 of 11

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

- 1) Obtain from Emergency Manager, the mR/HR of monitor in alarm

Main Steam Unit #1

RM-MS-170
 RM-MS-171
 RM-MS-172

OR

Main Steam Unit #2

RM-MS-270
 RM-MS-271
 RM-MS-272

OR

Auxiliary Feedwater Pump

Turbine Exhaust (AFPT)

RM-MS-176
 RM-MS-276

NOTE: If Auxiliary Feedwater Pump is isolated, no release is assumed from this pathway.

- 2) Obtain from the Emergency Communicator the STABILITY CLASS AND WIND SPEED
- 3) Obtain from Attachment 6 the appropriate CONVERSION FACTOR for the MAIN STEAM monitor and/or the AFPT monitor

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 9 of 11

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

- 4) Obtain SITE BOUNDARY DOSE RATE:

$$\frac{\text{mR/HR (MONITOR)} \times \text{CONVERSION FACTOR}}{\text{WIND SPEED}} = \frac{\text{mR}}{\text{HR}}$$

NOTE: IF release is through BOTH the Main Steam AND the Auxiliary Feedwater Pump Turbine Exhaust, the results from both monitors are ADDITIVE.

- 5) Log mR/HR on Attachment 3

5. DETERMINE SITE BOUNDARY THYROID DOSE RATE

- a) Determine SITE BOUNDARY WHOLE BODY DOSE RATE from Attachment 3.
- b) Determine CONVERSION FACTOR versus type of accident listed in Attachment 8.
- c) Multiply to determine SITE BOUNDARY THYROID DOSE RATE.
 $\text{Step a} \times \text{Step b} = \text{mR/HR}$
- d) Log results on Attachment 4

6. DETERMINE DOSE RATE AT 2, 5 AND 10 MILES:

- a) Obtain the STABILITY CLASS from Step 4 and SITE BOUNDARY DOSE RATE for Whole Body and Thyroid from attachment: 3 and 4

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 10 of 11

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6.	<p>(CONTINUED)</p> <p>b) Use Attachment 7 to determine the <u>MULTIPLICATION FACTOR</u></p> <p>c) Perform calculations to determine the <u>2</u>, <u>5</u> and <u>10</u> mile <u>DOSE RATE</u>:</p> $\text{DOSE RATE} \times \text{MULTIPLICATION FACTOR} = \frac{\text{mR}}{\text{HR}}$ <p>d) Log on Attachment <u>3</u> or <u>4</u></p>	
7.	<p>REPORT RESULTS</p> <p><u>NOTE</u>: <u>IF</u> site boundary dose rate is GREATER THAN OR EQUAL TO 1.0 REM/HR Whole Body <u>OR</u> 5.0 REM/HR Thyroid, notify the Emergency Manager that a GENERAL EMERGENCY condition exists.</p> <p style="text-align: center;"><u>OR</u></p> <p><u>IF</u> site boundary dose rate is GREATER THAN OR EQUAL TO 50 mR/HR for 30 minutes</p> <p style="text-align: center;"><u>OR</u></p> <p>500 mR/HR for 2 minutes Whole body (<u>OR</u> 5 times these levels to the thyroid)</p> <p>Notify the Emergency Manager that a SITE EMERGENCY condition exists.</p>	
	<p>a) Report results of attachment <u>3</u> <u>OR</u> <u>4</u> immediately to the Emergency Manager</p>	

NUMBER EPIP-4.08	PROCEDURE TITLE INITIAL OFFSITE RELEASE ASSESSMENT	REVISION 03
		PAGE 11 of 11

STEP

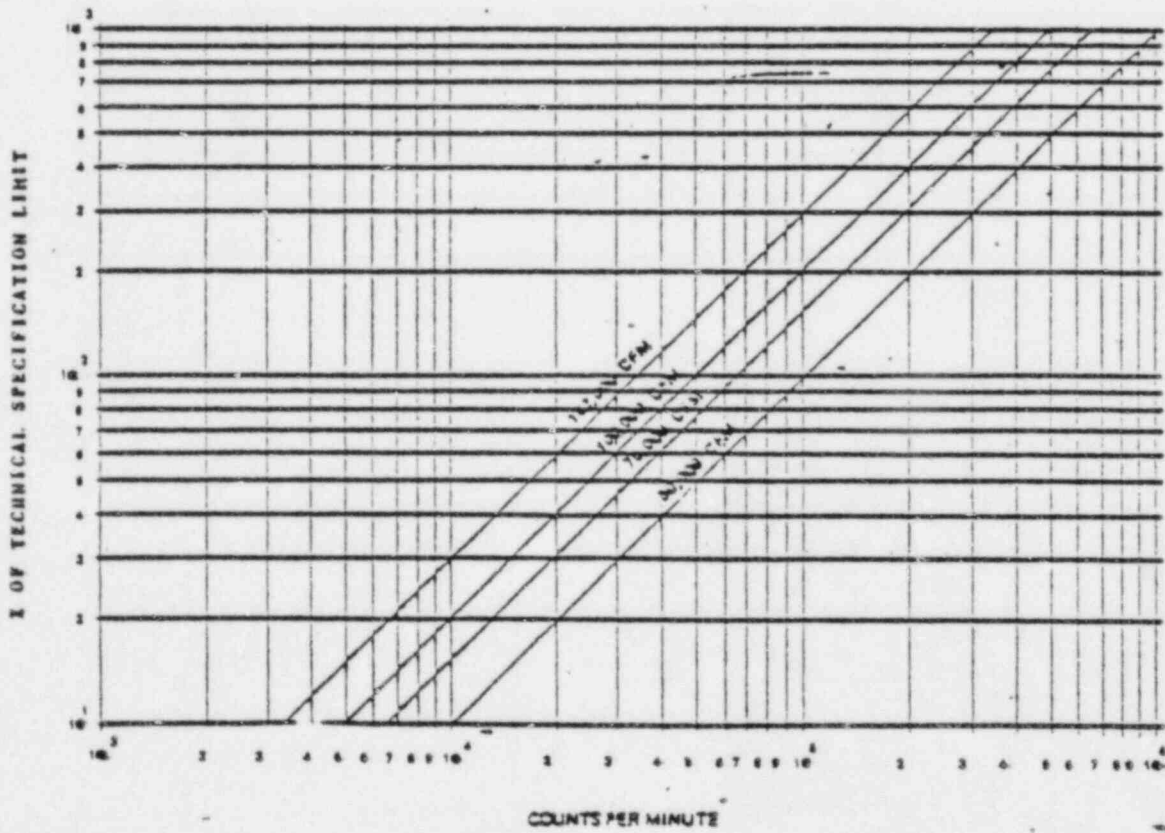
ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

8. RETURN TO CONTROLLING PROCEDURE
- a) Upon completion of this procedure, return to EPIP-4.01, Radiological Assessment Director Controlling Procedure
9. PROCEDURE COMPLETION:
- a) COMPLETED BY: _____
- DATE: _____
- TIME: _____

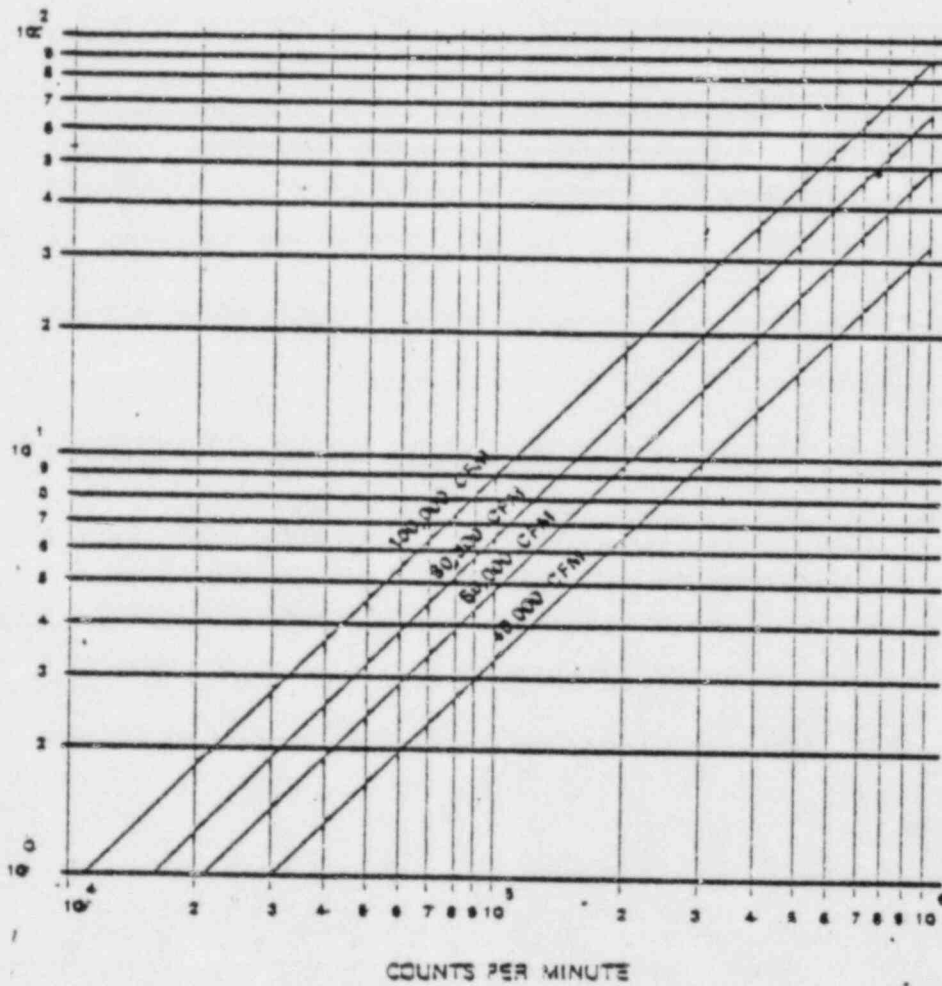
END

<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE INITIAL OFFSITE RELEASE ASSESSMENT VENT VENT A (VG 104)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 1 of 6</p>

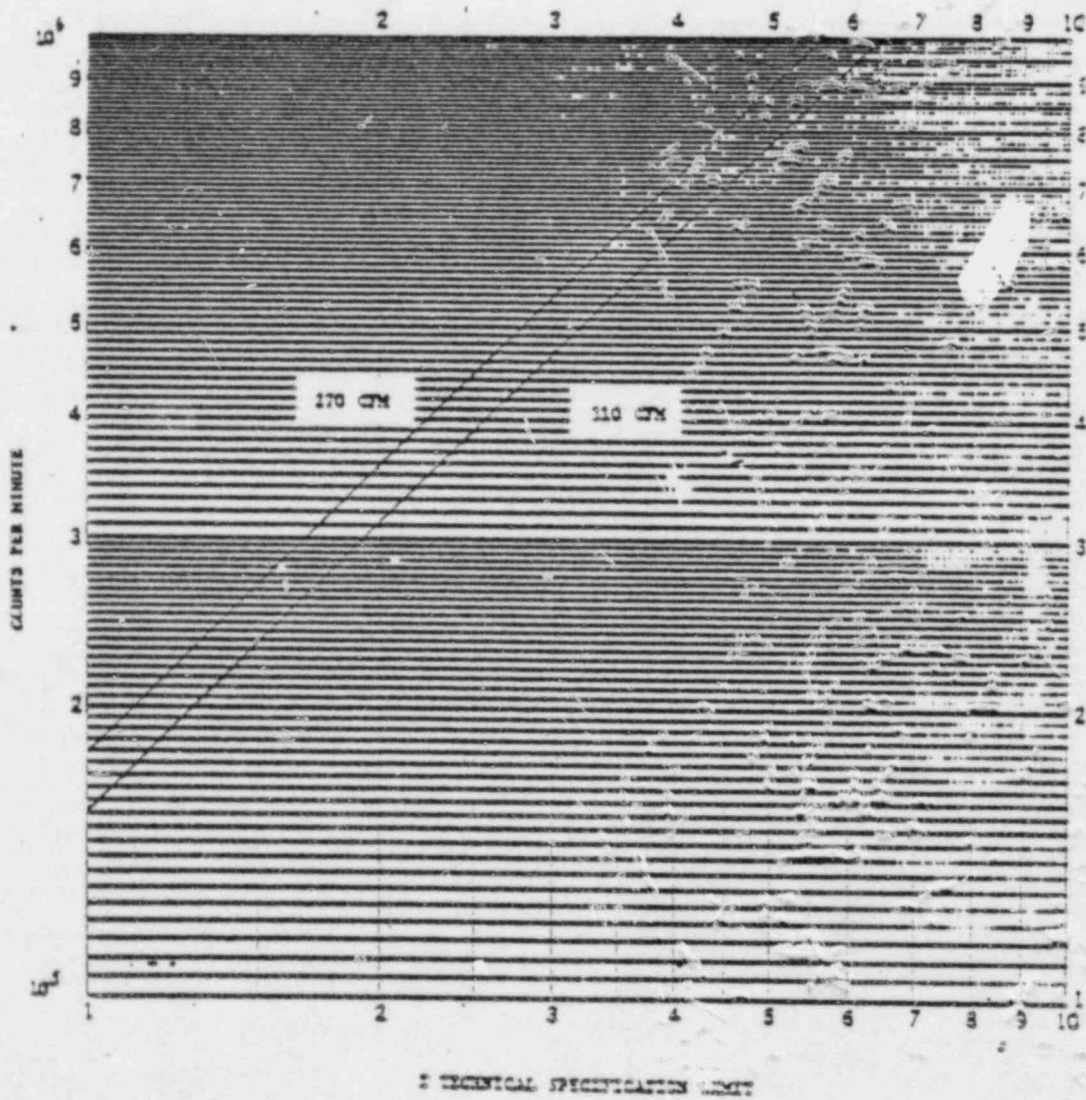


<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE INITIAL OFFSITE RELEASE ASSESSMENT VENT VENT B (VG 115)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 2 of 6</p>

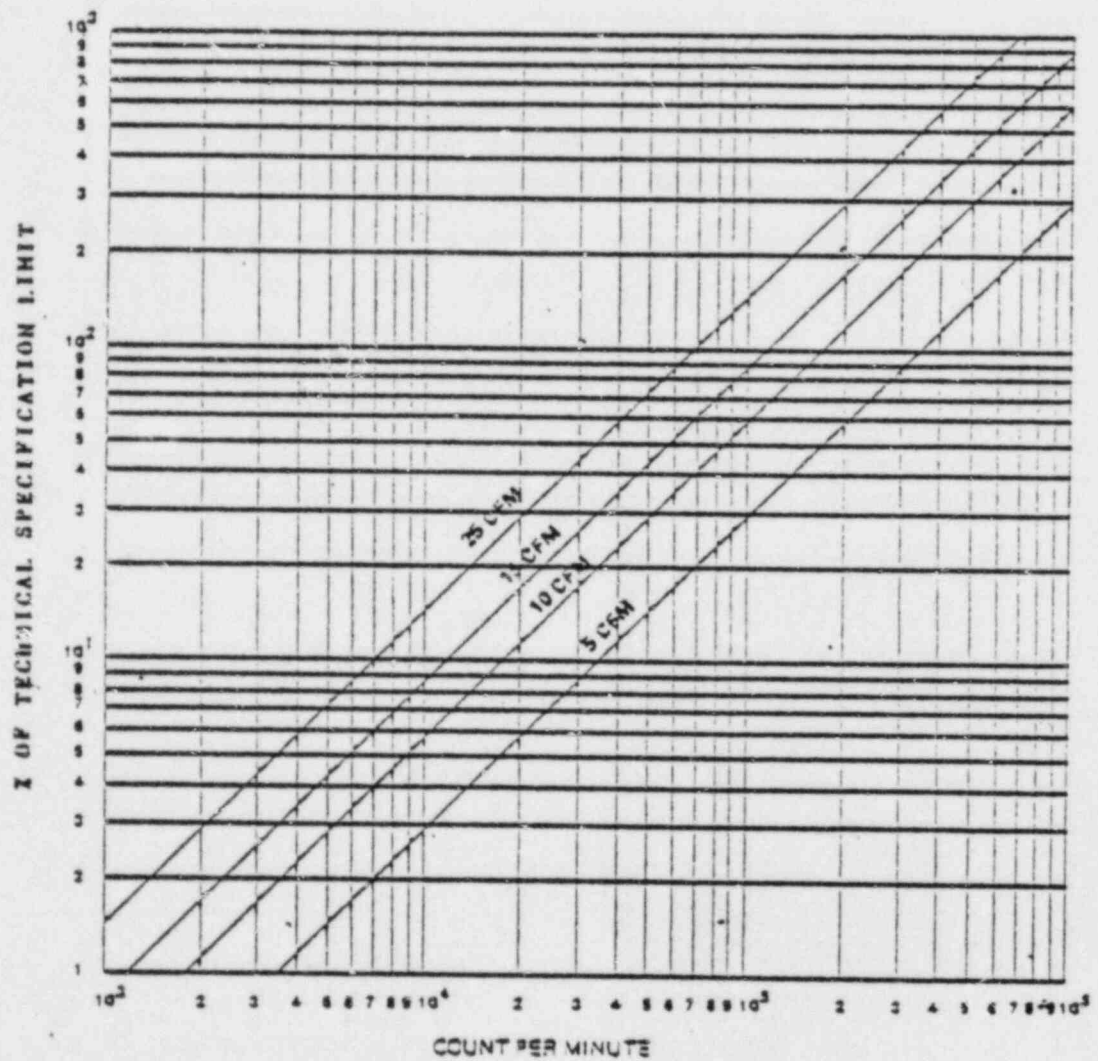
I OF TECHNICAL SPECIFICATION LIMIT



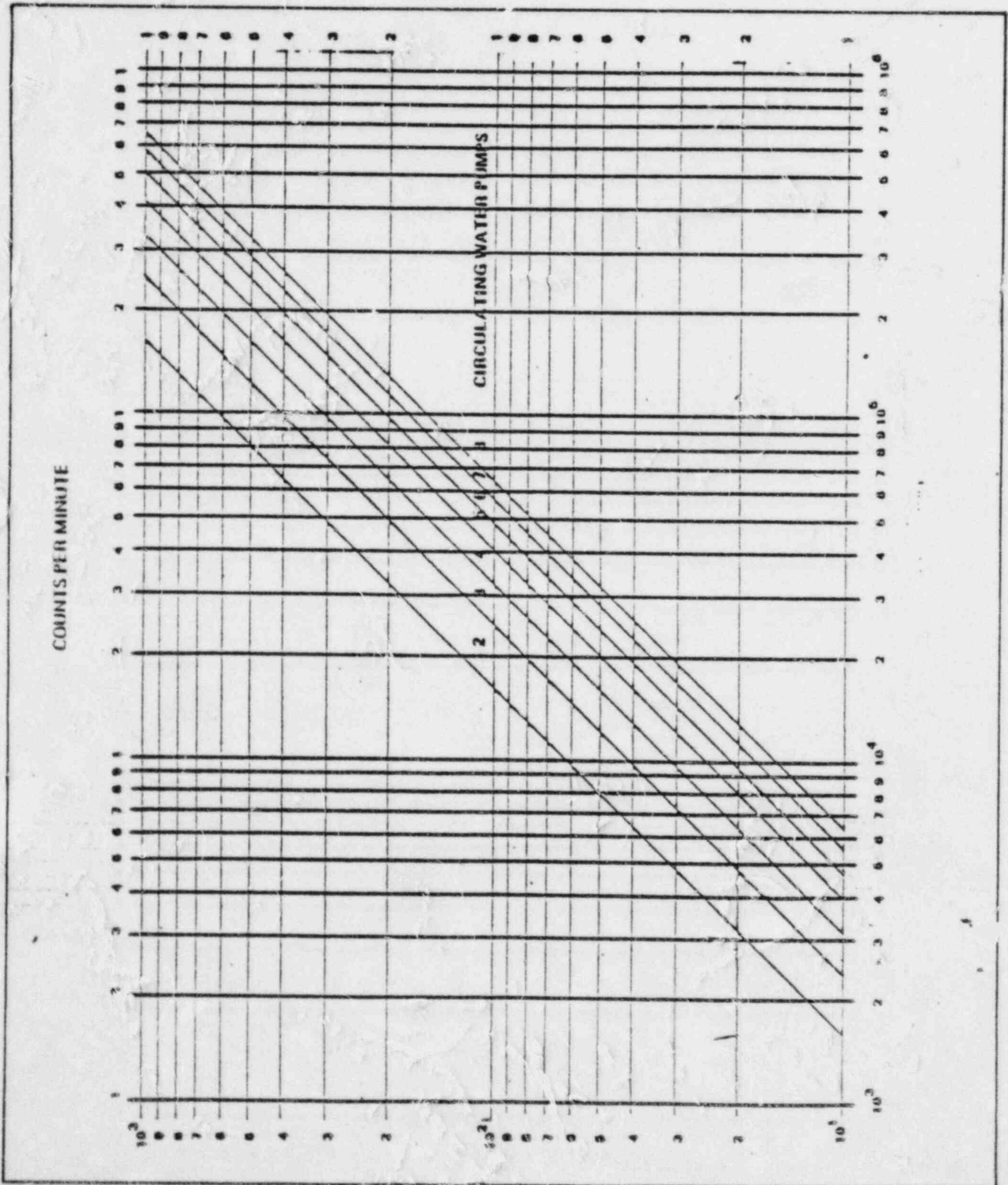
<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE % TECHNICAL SPECIFICATION LIMIT PROCESS VENT (GW-102)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 3 of 6</p>



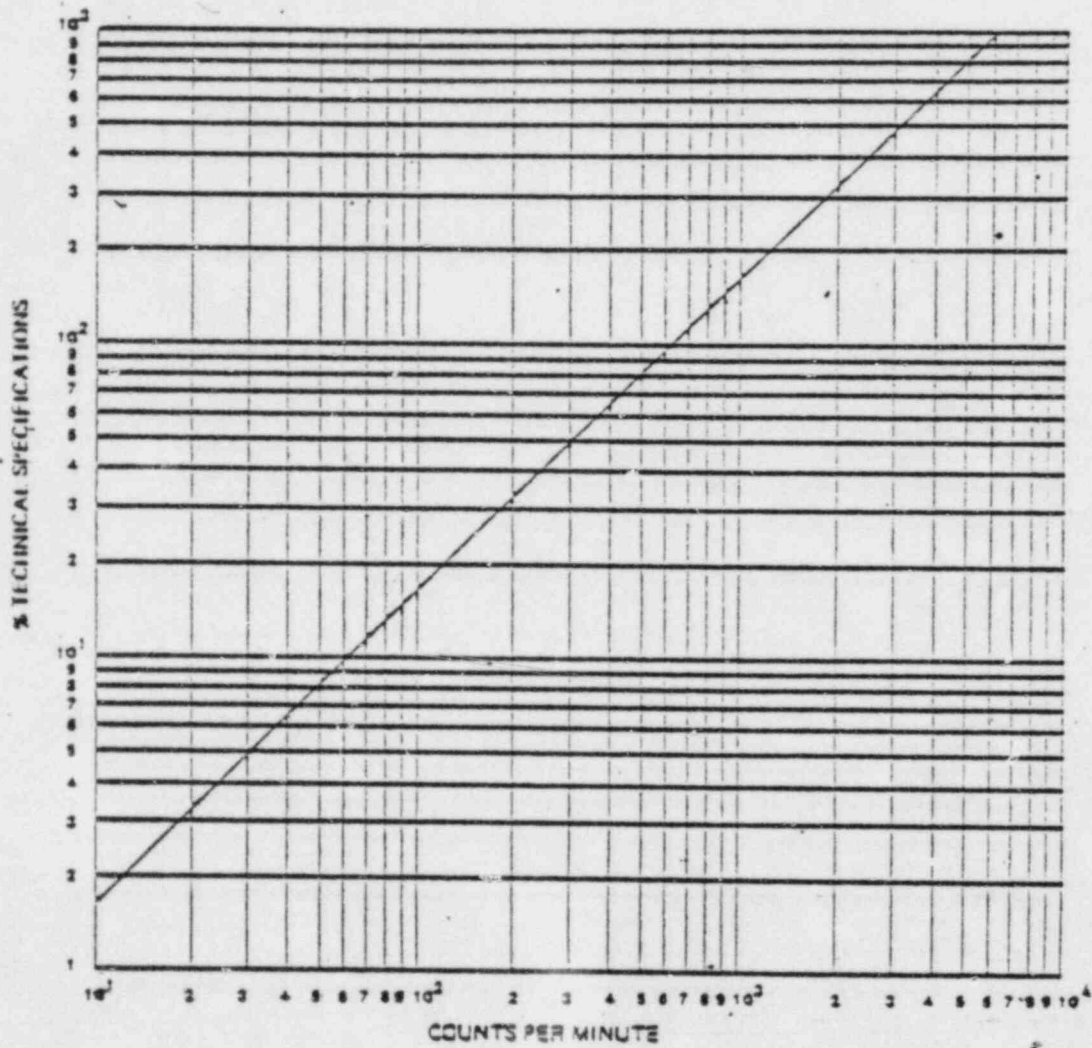
<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE INITIAL OFFSITE RELEASE ASSESSMENT CONDENSOR AIR EJECTOR (SV-121, SV-221)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 4 of 6</p>



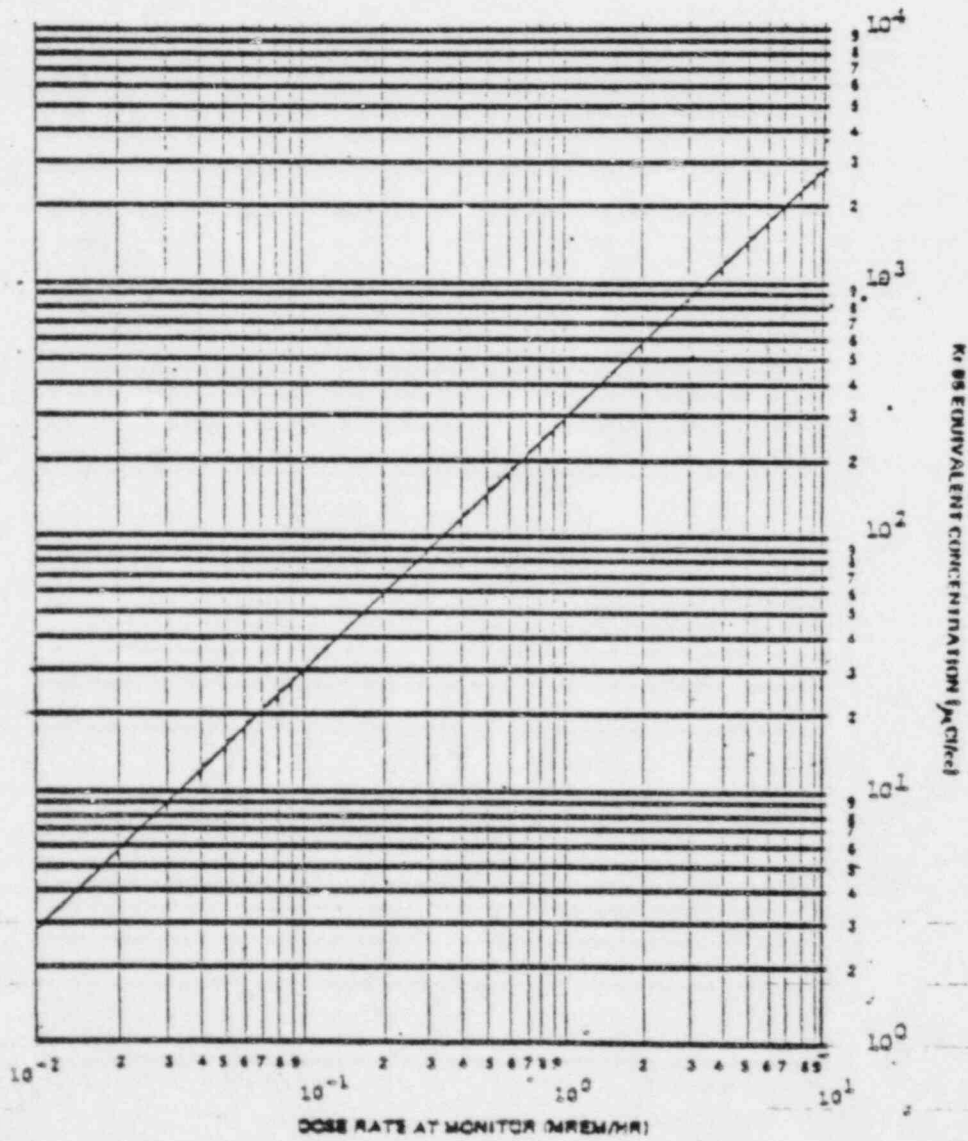
<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE INITIAL OFFSITE RELEASE ASSESSMENT CLARIFIER DISCHARGE (LW - 111)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 5 of 6</p>



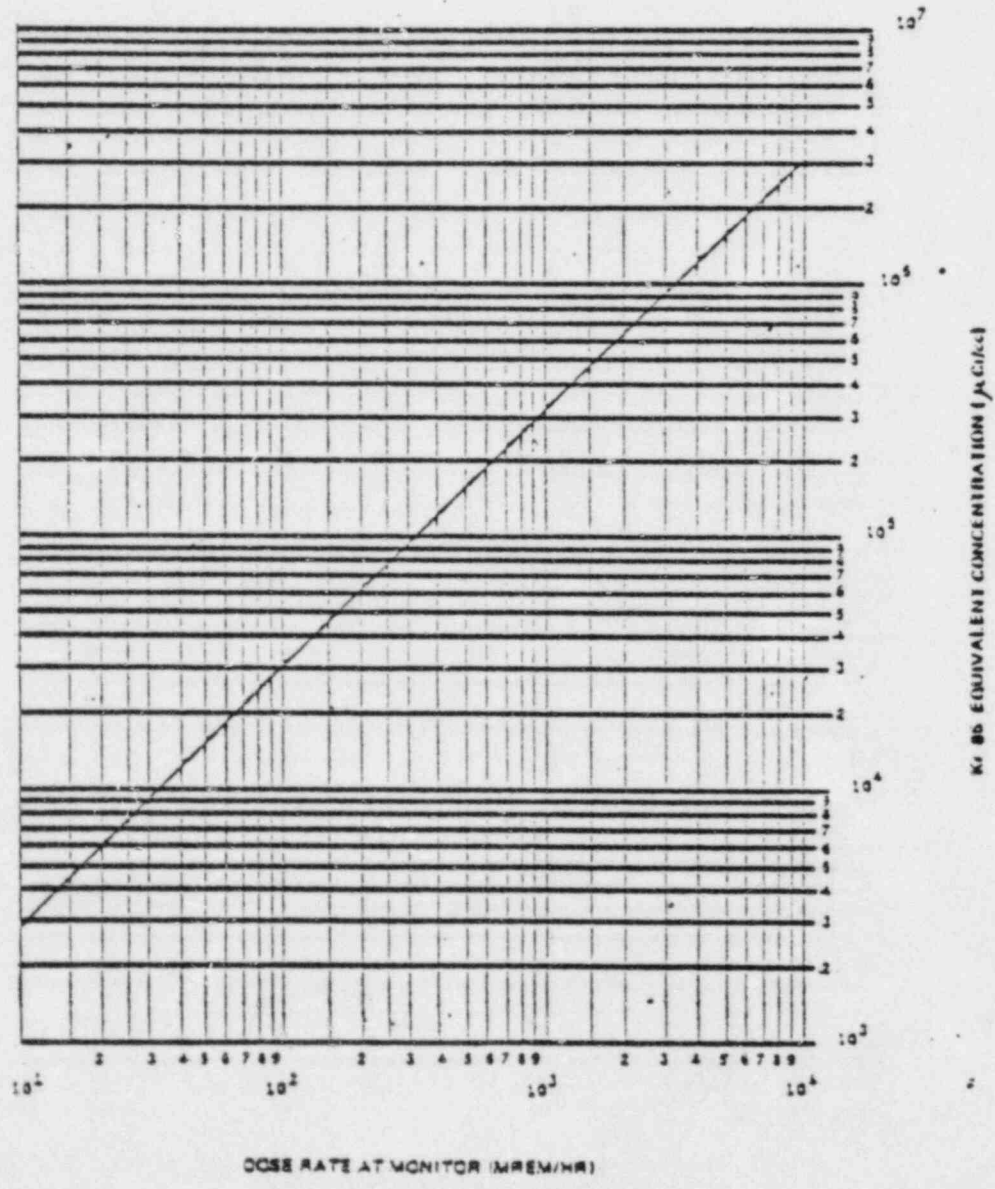
<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE INITIAL OFFSITE RELEASE ASSESSMENT DISCHARGE TUNNEL (SW-130, SW-230)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 6 of 6</p>



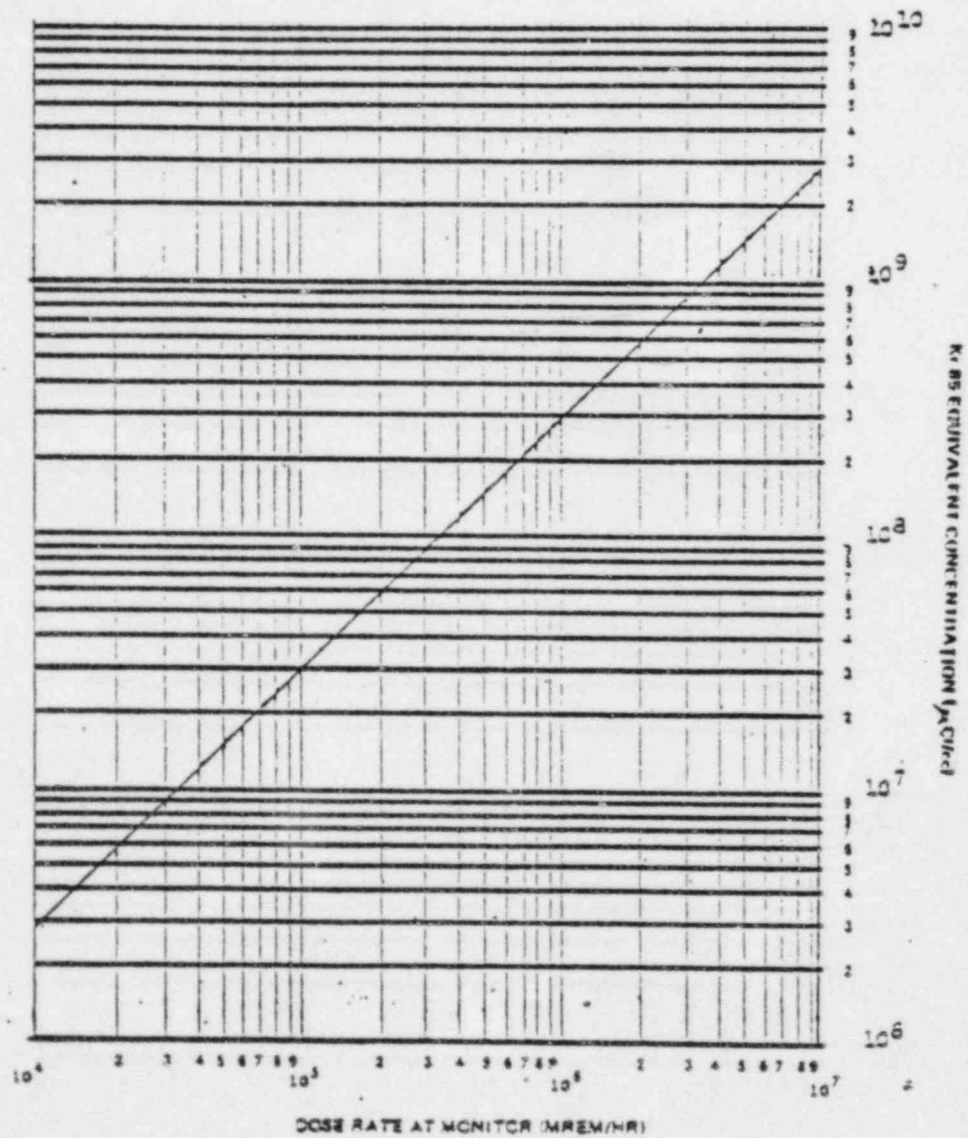
<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE PROCESS VENT OR VENT VENT MR/HR VS. UCI/CC (RM-GW-173, RM-VG-174, or RM-VG-175)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 5</p>		<p>PAGE 1 of 3</p>



<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE PROCESS VENT OR VENT VENT MR/HR VS. UCI/CC (RM-GW-173, RM-VG-174, or RM-VG-175)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 5</p>		<p>PAGE 2 of 3</p>



<p>NUMBER EPIP-4.08</p>	<p>ATTACHMENT TITLE PROCESS VENT OR VENT VENT MR/HR VS. UCI/CC (RM-GW-173, RM-VG-174, or RM-VG-175)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 5</p>		<p>PAGE 3 of 3</p>



NUMBER EPIP-4.08	ATTACHMENT TITLE CONVERSION FACTORS	REVISION 03
ATTACHMENT 6		PAGE 1 of 1

Stability Class	CONVERSION FACTORS			
	VG-104	VG-113	GW-102	SV-121, 221
A	4.65E-6	1.47E-7	1.03E-8	2.12E-6
B	4.17E-5	1.32E-6	9.22E-8	1.90E-5
C	1.51E-4	4.78E-6	3.34E-7	6.88E-5
D	4.48E-4	1.41E-5	9.89E-7	2.04E-4
E	8.75E-4	2.76E-5	1.93E-6	3.98E-4
F	1.84E-3	5.80E-5	4.06E-6	8.35E-4
G	3.54E-3	1.12E-4	7.83E-6	1.61E-3

Stability Class	VG-174		VG-175		GW-173
	High Range Vent	Vent A	High Range Vent	Vent B	High Range process Vent
A	2.25	E-1	1.70	E-1	4.85E-4
B	2.01	E+0	1.53	E+0	4.34E-3
C	7.30	E+0	5.54	E+0	1.57E-2
D	2.16	E+1	1.64	E+1	4.66E-2
E	4.22	E+1	3.20	E+1	9.11E-2
F	8.86	E+1	6.72	E+1	1.91E-1
G	1.71	E+2	1.30	E+2	3.69E-1

Stability Class	Main Steam	Auxiliary Feed Pump	Turbine Exhaust
	A	4.82 E-1	8.53E-1
B	4.32 E+0	7.65E+0	
C	1.57 E+1	2.77E+1	
D	4.63 E+1	8.21E+1	
E	9.06 E+1	1.60E+2	
F	1.90 E+2	3.37E+2	
G	3.66 E+2	6.49E+2	

<i>NUMBER</i> EPIP-4.08	<i>ATTACHMENT TITLE</i> X/Q MULTIPLICATION FACTOR	<i>REVISION</i> 03
<i>ATTACHMENT</i> 7		<i>PAGE</i> 1 of 1

STABILITY CLASS							
Distance	A	B	C	D	E	F	G
<i>Miles</i>							
2	3.59E-1	1.09E-1	2.34E-1	2.71E-1	2.89E-1	3.31E-1	4.14E-1
5	1.58E-1	2.30E-2	4.84E-2	6.78E-2	8.38E-2	9.64E-2	1.36E-1
10	8.15E-2	1.21E-2	1.54E-2	2.49E-2	3.47E-2	3.99E-2	5.64E-2

NUMBER EPIP-4.08	ATTACHMENT TITLE THYROID DOSE CONVERSION FACTORS	REVISION 03
ATTACHMENT 8		PAGE 1 of 2

ACCIDENT	TIME AFTER ACCIDENT (HOURS)	CONVERSION FACTORS
1. LOCA	0.5	27
	1.0	32
	1.5	36
	2.0	41
	2.5	46
	3.0	51
	3.5	57
	4.0	62
	4.5	69
	5.0	75
	6.5	98
	8.0	123
	10.0	158
	12.5	209
	15.0	258
	24.0	389
	48.0	707
	72.0	758

NUMBER EPIP-4.08	ATTACHMENT TITLE 	REVISION 03
ATTACHMENT 8	THYROID DOSE CONVERSION FACTORS	PAGE 2 of 2

ACCIDENT	FILTERED (CHARCOAL)	UNFILTERED
2. Primary Gas Release	6.46 E + 0	6.46 E + 1
3. Steam Generator Tube Rupture		2.09 E + 2
4. Fuel Handling Accident	5.37 E + 2	9.30 E + 3
5. Waste Gas Decay Tank	5.37 E - 3	5.37 E - 2
6. Main Steam Line Break (with prior primary to secondary leakage)	3.50 E + 1	3.50 E + 2

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.09	SOURCE TERM ASSESSMENT (With 4 Attachments)	03
		PAGE 1 of 9

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

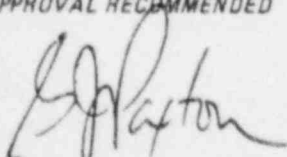
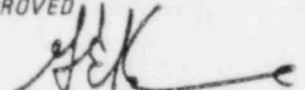
USER
 Dose Assessment Team Members.

ENTRY CONDITIONS
 Upon activation of EPIP-4.03, Dose Assessment Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED	APPROVED	DATE
	 CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	05-25-83

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03
		PAGE 2 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE: a) BY: _____ DATE: _____ TIME: _____	
2.	SOURCE TERM ASSESSMENT: a) Source Term (Ci/sec) may be obtained from any of the following: 1) Normal range <u>STATION MONITORS</u> 2) <u>SAMPLE EFFLUENT</u> 3) <u>SAMPLE of STATION INVENTORY</u> 4) <u>CONTAINMENT PERSONNEL HATCH MONITOR</u> 5) <u>SAMPLE of CONTAINMENT AIR</u> 6) <u>ENVIRONMENTAL SAMPLE DATA</u> b) <u>SOURCE TERM</u> based on <u>MONITOR</u> readings should be used only for <u>INITIAL</u> assessment and to establish <u>TRENDS</u> c) <u>IF</u> source term is obtained from a monitor reading, sampling should be done to more accurately determine the source term d) Source term will have the <u>UNITS</u> of <u>CURIE/SEC</u>	

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03 PAGE 3 of 9
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

e) SOURCE TERM obtained from
 Containment High Range Monitor
OR Containment Sampling is
 used for analysis following a
 Loss of Coolant Accident

3. SOURCE TERM - NORMAL STATION
 MONITORS:

NOTE: IF MORE THAN ONE effluent pathway is involved in a release,
 repeat this step for ALL PATHWAYS involved and ADD the results
 for TOTAL release.

a) SOURCE TERM may be obtained
 from the following MONITORS:

1) VENT VENT A VG-104

OR

2) VENT VENT B VG-113

OR

3) PROCESS VENT GW-102

OR

4) CONDENSER AIR EJECTOR
SV-121, SV-221

a) IF normal range monitors are
offscale, GO TO Step 4.

OR

IF release pathway is through
 the main steam system, GO TO
 Step 10.

NOTE: CONDENSER AIR EJECTOR may be diverted to containment.

b) Obtain the CPM, above
 background, for monitor
 of interest

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03
		PAGE 4 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	<p>(CONTINUED)</p> <p>1) Log the DATE, TIME, MONITOR number and the net <u>CPM</u> of Attachment <u>1</u></p> <p>c) Obtain the <u>FLOW RATE</u> (CFM) effluent pathway</p> <p>d) Obtain <u>CONVERSION FACTOR</u> for monitor of interest:</p> <p>1) <u>VG-104</u> 4.29E-10</p> <p style="padding-left: 40px;"><u>OR</u></p> <p>2) <u>VG-113</u> 1.75E-11</p> <p style="padding-left: 40px;"><u>OR</u></p> <p>3) <u>GW-102</u> 4.29E-10</p> <p style="padding-left: 40px;"><u>OR</u></p> <p>4) <u>SV-121, SV-221</u> 1.10E-6</p> <p>e) Perform the following calculations to obtain <u>Ci/sec</u> (Xe-133 Equivalent)</p> <p style="padding-left: 40px;">$CPM \times CONVERSION FACTOR \times CFM = Ci/SEC$</p> <p>1) Log results on Attachment <u>1</u></p>	
4.	<p>SOURCE TERM - SAMPLE EFFLUENTS:</p> <p><u>NOTE: IF MORE THAN ONE</u> effluent pathway is involved in the release, repeat this step for <u>ALL PATHWAYS</u> involved and <u>ADD</u> the results for a <u>TOTAL</u> release.</p>	

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03
		PAGE 5 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

- a) Request Radiation Protection Supervisor to activate EPIP-4.24, Gaseous Effluent Sampling During an Emergency, to obtain a sample of one of the following:

1) VENT VENT A OR
 VENT VENT B

OR

2) PROCESS VENT

OR

3) CONDENSER AIR EJECTOR

NOTE: CONDENSER AIR EJECTOR may be diverted to containment, eliminating need to assess source term.

- b) Have sample analyzed as per normal count room procedures
OR EPIP-4.26, High Level Activity Sample Analysis

1) Log results of the analysis on Attachment 2

- c) Perform calculations on Attachment 2 to obtain EQUIVALENT ACTIVITY I-131
OR Xe-133 (uCi/ml)

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03
		PAGE 6 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	(CONTINUED) d) Obtain FLOW RATE of effluent pathway 1) Convert CFM to <u>MLS/SEC</u> $\text{CFM} \times 472 = \frac{\text{MLS}}{\text{SEC}}$ e) Calculate <u>SOURCE TERM</u> (Ci/SEC) $\frac{\text{EQUIVALENT ACTIVITY} \times \text{FLOW RATE}}{1.00 \text{ E} + 6} = \text{Ci/SEC}$	
5.	CORRECT SOURCE TERM FOR MAXIMUM RELEASE: a) <u>IF</u> sample from Step 4 was a grab sample and <u>NOT</u> obtained at maximum release, correct for maximum source term: 1) Obtain the maximum monitor reading 2) Obtain monitor reading at time of sample 3) Perform following calculation to obtain MAXIMUM RELEASE RATE: $\frac{\text{Monitor Max.}}{\text{Monitor Sample}} \times \text{Source Term} = \text{Maximum Ci/SEC}$	a) <u>GO TO</u> Step 10
6.	SOURCE TERM - STATION INVENTORY: a) <u>IF</u> release originated from a gas storage tank (ie. Waste Gas Decay Tank, Volume Control Tank, etc.) sample the activity remaining in the tank	a) <u>GO TO</u> Step 7

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03 PAGE 7 of 9
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. (CONTINUED)

- b) Determine VOLUME of release from the following equation:

$$\text{VOLUME} = \frac{P_1 V_1 T_2}{T_1 P_2}$$

- 1) P_1 = pressure PRIOR to release
- 2) P_2 = pressure AFTER release

NOTE: Error in calculation of VOLUME of gas may result due to water level in tank. IF tank has water in it, subtract volume occupied by the water from the design volume of the tank.

- 3) V_1 = design volume of tank
- 4) T_1 = Temperature prior to release ($T_1 = ^\circ\text{F} + 459$)
- 5) T_2 = temperature after release ($T_2 = ^\circ\text{F} + 459$)
- 6) Convert volume of release

$$\text{ft}^3 \times 2.832\text{E}+4 = \text{MLS}$$

- c) Convert activity determined from above Substep a to EQUIVALENT I-131 and/or Xe-133 ACTIVITY using Attachment 2
- d) Perform the following calculations to determine SOURCE TERM:

$$\frac{\text{VOLUME (mls)} \times \text{EQUIVALENT ACTIVITY}}{1.00\text{E}+6 \times \text{Time of Release (Seconds)}} = \text{Ci/SEC}$$

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03
		PAGE 8 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7.	<p>SOURCE TERM - CONTAINMENT PERSONNEL HATCH MONITOR:</p> <p>a) <u>IF LOCA</u> conditions exist obtain the <u>DOSE RATE</u> (mR/hr) from Containment High Range Monitor of affected unit</p> <p>b) Obtain length of TIME (HOURS) since <u>SHUTDOWN</u> of <u>UNIT</u></p> <p>c) Determine the extent of fuel damage using Attachment <u>3</u></p> <p>d) Use information from above Substep <u>b</u> and <u>c</u> and attachment <u>4</u> to determine equivalent curies I-131 and Xe-133, available for release</p>	<p>a) <u>GO TO</u> Step <u>9</u>.</p>
<p><u>NOTE</u>: <u>IF</u> rupture of containment is imminent, consider <u>ALL</u> activity in Substep <u>d</u>, available for release.</p>		
<p>e) Determine <u>RELEASE RATE</u></p> <p>1) Calculate release rate:</p> <p style="padding-left: 40px;">Equivalent CURIES X 4.35 E-8 = Ci/SEC</p>		
8.	<p>SOURCE TERM - CONTAINMENT SAMPLE:</p> <p>a) <u>IF LOCA</u> conditions exist, request the Radiation Protection Supervisor to activate EPIP-4.22, <u>Post Accident Sampling of Containment Air</u></p>	

NUMBER EPIP-4.09	PROCEDURE TITLE SOURCE TERM ASSESSMENT	REVISION 03
		PAGE 9 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

8. (CONTINUED)

b) Convert the results of the analysis of the Containment Air Sample to EQUIVALENT I-131 and Xe-133 activity (uCi/ml), using Attachment 2

c) Determine RELEASE RATE:

1) EQUIVALENT CURIES x 2.25E-3 = Ci/SEC

9. SOURCE TERM - ENVIRONMENTAL DATA

a) IF the source term can NOT be estimated from onsite sampling and/or monitor reading, return to the controlling procedure, obtaining the source term from environmental monitoring data

a) IF release pathway is monitored OR able to be sampled, GO TO Step 10.

10. RETURN TO CONTROLLING PROCEDURE

a) Upon completion of this procedure, RETURN TO EPIP-4.03, Dose Assessment Controlling Procedure

11. PROCEDURE COMPLETION:

a) Completed By: _____

Date: _____

Time: _____

END

NUMBER EPIP-4.09	ATTACHMENT TITLE EQUIVALENT ACTIVITY Xe-133 IMMERSION DOSE	REVISION 03
ATTACHMENT 2		PAGE 1 of 2

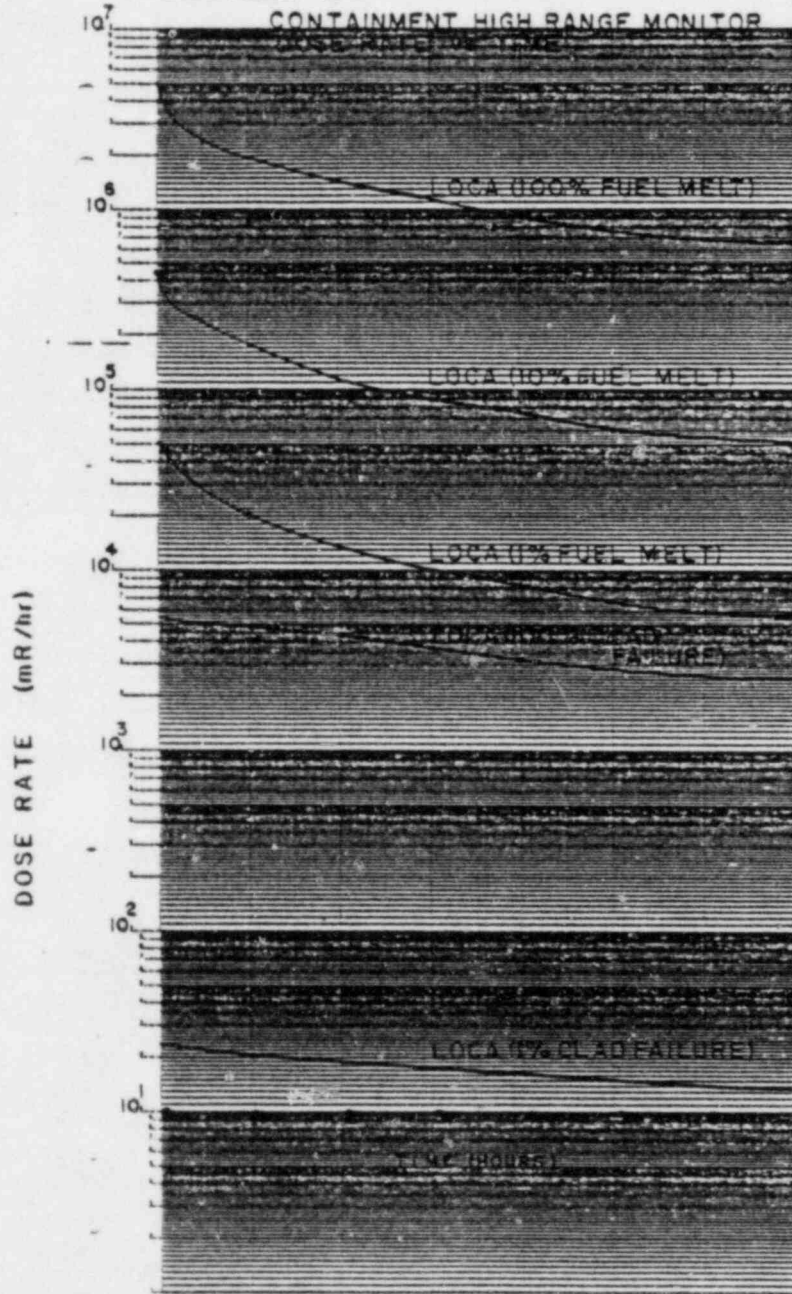
NUCLIDE	ACTIVITY uCi/ml or Ci A	DOSE EQUIVALENT FACTOR B	EQUIVALENT ACTIVITY A x B
KR-83M	_____	5.49E-2	_____
KR-85	_____	5.03E-2	_____
KR-85M	_____	3.55E+0	_____
KR-87	_____	1.78E+1	_____
KR-88	_____	4.56E+1	_____
KR-89	_____	4.20E+1	_____
XE-131M	_____	4.30E-1	_____
XE-133	_____	1.00E+0	_____
XE-133M	_____	9.09E-1	_____
XE-135	_____	5.57E+0	_____
XE-135M	_____	9.74E+0	_____
XE-137	_____	4.12E+0	_____
XE-138	_____	2.54E+1	_____
I-130	_____	4.79E+1	_____
I-131	_____	8.57E+0	_____
I-132	_____	5.13E+1	_____
I-133	_____	1.37E+1	_____
I-134	_____	5.91E+1	_____
I-135	_____	3.55E+1	_____
Σ of EQUIVALENT XE-133 = _____			

<i>NUMBER</i> EPIP-4.09	<i>ATTACHMENT TITLE</i> EQUIVALENT ACTIVITY I-131 INHALATION DOSE	<i>REVISION</i> 03
<i>ATTACHMENT</i> 2		<i>PAGE</i> 2 of 2

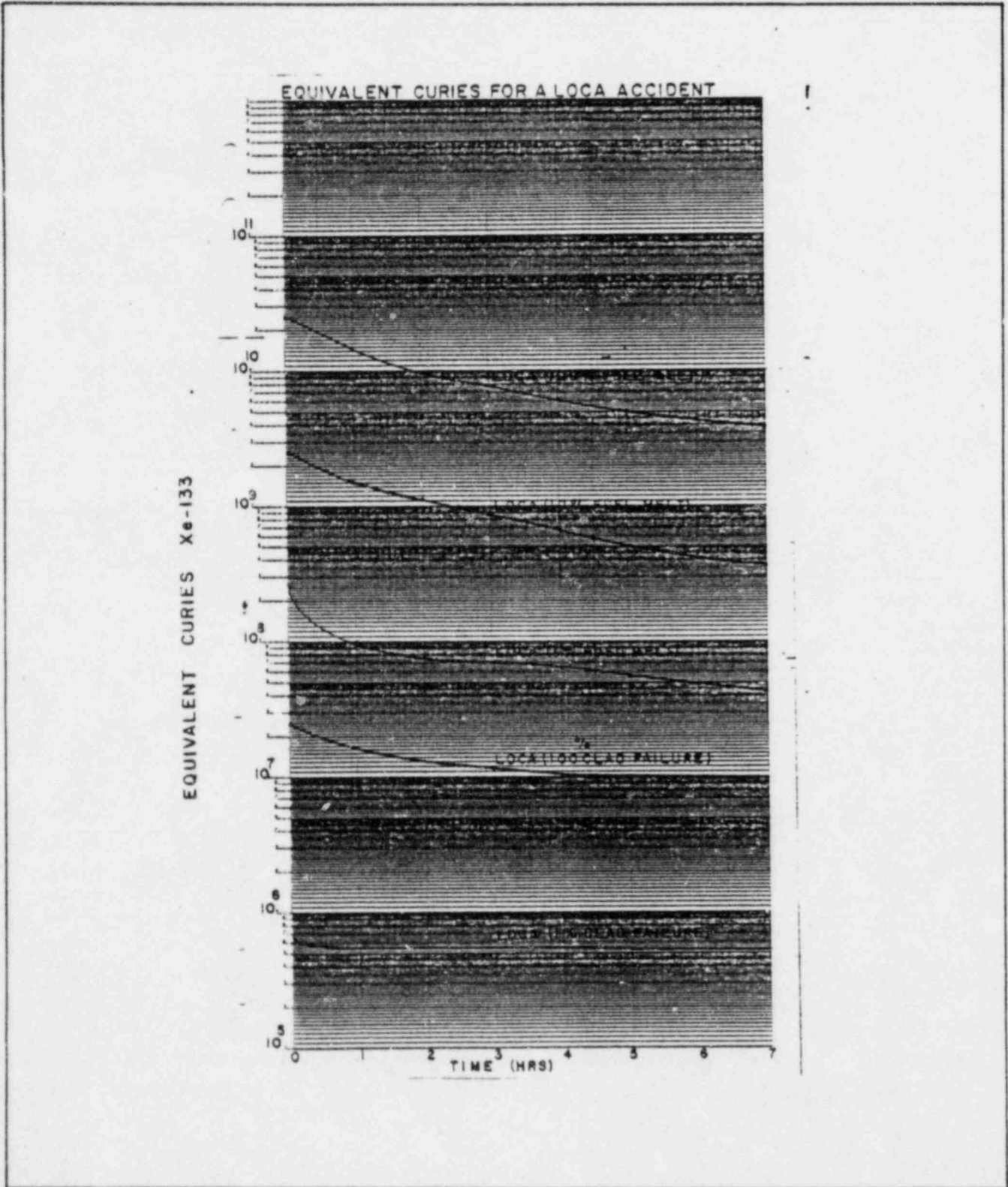
NUCLIDE	ACTIVITY uCi/ml or Ci A	DOSE EQUIVALENT FACTOR B	EQUIVALENT ACTIVITY A x B
I-130	_____	1.14E-1	_____
I-131	_____	1.00E+0	_____
I-132	_____	1.19E-2	_____
I-133	_____	2.37E-1	_____
I-134	_____	3.12E-3	_____
I-135	_____	4.87E-2	_____

Σ of EQUIVALENT I-131 = _____ uCi/ml or Ci

<p>NUMBER EPIP-4.09</p>	<p>ATTACHMENT TITLE PERSONNEL HATCH MONITOR DOSE RATE (MR/HR) VERSUS TIME</p>	<p>REVISION 03</p>
<p>ATTACHMENT 3</p>		<p>PAGE 1 of 1</p>



<p>NUMBER EPIP-4.09</p>	<p>ATTACHMENT TITLE EQUIVALENT CURIES Xe-133 FOR LOCA ACCIDENT</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>		<p>PAGE 1 of 2</p>



NUMBER EPIP-4.09	ATTACHMENT TITLE EQUIVALENT CURIES I-131 FOR LOCA ACCIDENT	REVISION 03
ATTACHMENT 4		PAGE 2 of 2

NOTE: Within the first 8 hours following LOCA incident, IODINE decay is insignificant.

<u>EVENT</u>	<u>EQUIVALENT CURIES</u> <u>I-131</u>
LOCA (1% Clad Failure)	3.52 E+2
LOCA (100% Clad Failure)	3.85 E+5
LOCA (1% Fuel Melt)	5.93 E+5
LOCA (10% Fuel Melt)	5.93 E+6
LOCA (100% Fuel Melt)	5.93 E+7

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.10	DETERMINATION OF X/Q (With 5 Attachments)	03
		PAGE 1 of 5

PURPOSE

Determine atmospheric diffusion factor, X/Q.

USER

Radiological Assessment Director and/or Dose Assessment Team.

ENTRY CONDITIONS

Activated by EPIP-4.03, Dose Assessment Controlling Procedure

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED	APPROVED	DATE
	 CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	05-24-83

NUMBER	PROCEDURE TITLE	REVISION 03
EPIP-4.10	DETERMINATION OF X/Q	PAGE 2 of 5

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE: a) Initiated By: _____ Date: _____ Time: _____	
2.	DETERMINE CENTERLINE X/Q AT PREDETERMINED DISTANCE a) <u>IF</u> X/Q is for site boundary and/or distance of <u>0.25</u> mile increments, continue with this instruction. 1) Obtain from the Radio- logical Assessment Director: Wind Speed <u>AND</u> Stability Class 2) Determine distance (miles) for which X/Q is to be calculated 3) With Stability Class, Wind Speed and Distance determine X/Q from Attach- ment <u>1</u> . 4) Correct X/Q from Substep <u>3</u> for current wind speed: Actual X/Q = $\frac{X/Q}{WIND\ SPEED\ (mph)}$	a) <u>IF</u> X/Q is needed for other distances, <u>GO TO</u> , Step <u>3</u> . 1) Obtain information from the Emergency Communicator if Radiological Assessment Director <u>NOT</u> available.

NUMBER EPIP-4.10	PROCEDURE TITLE DETERMINATION OF X/Q	REVISION 03
		PAGE 3 of 5

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: Dispersion coefficients for stability class G are determined by: coefficients (stability class F) x 0.6.

NOTE: For Stability Class A and distances GREATER THAN 1500 meters,
 $\sigma_z = 2000$.

or Stability Class B and distances GREATER THAN 5000 meters,
 $\sigma_z = 2000$.

3. DETERMINE CENTERLINE X/Q AT ANY DISTANCE

a) IF X/Q is required for a distance other than calculated by Step 1, continue with this instruction

a) GO TO Step 4.

1) Determine distance required for X/Q (miles)

Convert miles to meters:

MILES x 1609 = METERS

2) Obtain current WIND SPEED AND STABILITY CLASS from the Radiological Assessment Director

2) Obtain from the Emergency Communicator if Radiological Assessment Director NOT available.

Convert wind speed (mph) to meters per second

mph x 0.447 = $\frac{\text{meter}}{\text{sec}}$

3) With the wind speed (meters/sec) and Stability Class, determine the dispersion coefficients:

NUMBER EPIP-4.10	PROCEDURE TITLE DETERMINATION OF X/Q	REVISION 03
		PAGE 4 of 5

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3. (CONTINUED)

Horizontal coefficient
(σ_y) use Attachment 2

AND

Vertical coefficient
(σ_z) use Attachment 3

4) Determine X/Q by following formula:

$$X/Q = \frac{1}{(3.14 \sigma_z \sigma_y + 758) \text{ (wind speed m/Sec)}}$$

4. DETERMINE X/Q NOT ON CENTERLINE

a) IF X/Q is required for distances off the centerline of the plume, continue with this instruction

a) IF off-centerline X/Q NOT required, GO TO Step 5.

1) Determine downwind distance (miles) for X/Q using Step 2 or Step 3.

2) Determine Stability Class

3) Determine centerline X/Q from Step 2 or Step 3.

4) Using DISTANCE and STABILITY CLASS, determine value of:

$$\frac{1}{2 (\sigma_y)^2} \text{ from Attachment } \underline{4}$$

NUMBER EPIP-4.10	PROCEDURE TITLE DETERMINATION OF X/Q	REVISION 03
		PAGE 5 of 5

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

4. (CONTINUED)

- 5) Determine distance y , perpendicular to centerline which X/Q is to be calculated (See Attachment 5)

convert y to meters
miles x 1609 = meters

- 6) Determine X/Q off centerline by the following formula:

$$X/Q = \frac{X/Q \text{ centerline}}{e \left(\left(\frac{1}{2(\sigma_y)^2} \right) y^2 \right)}$$

5. PROCEDURE COMPLETION:

a) COMPLETED BY: _____

DATE: _____

TIME: _____

END

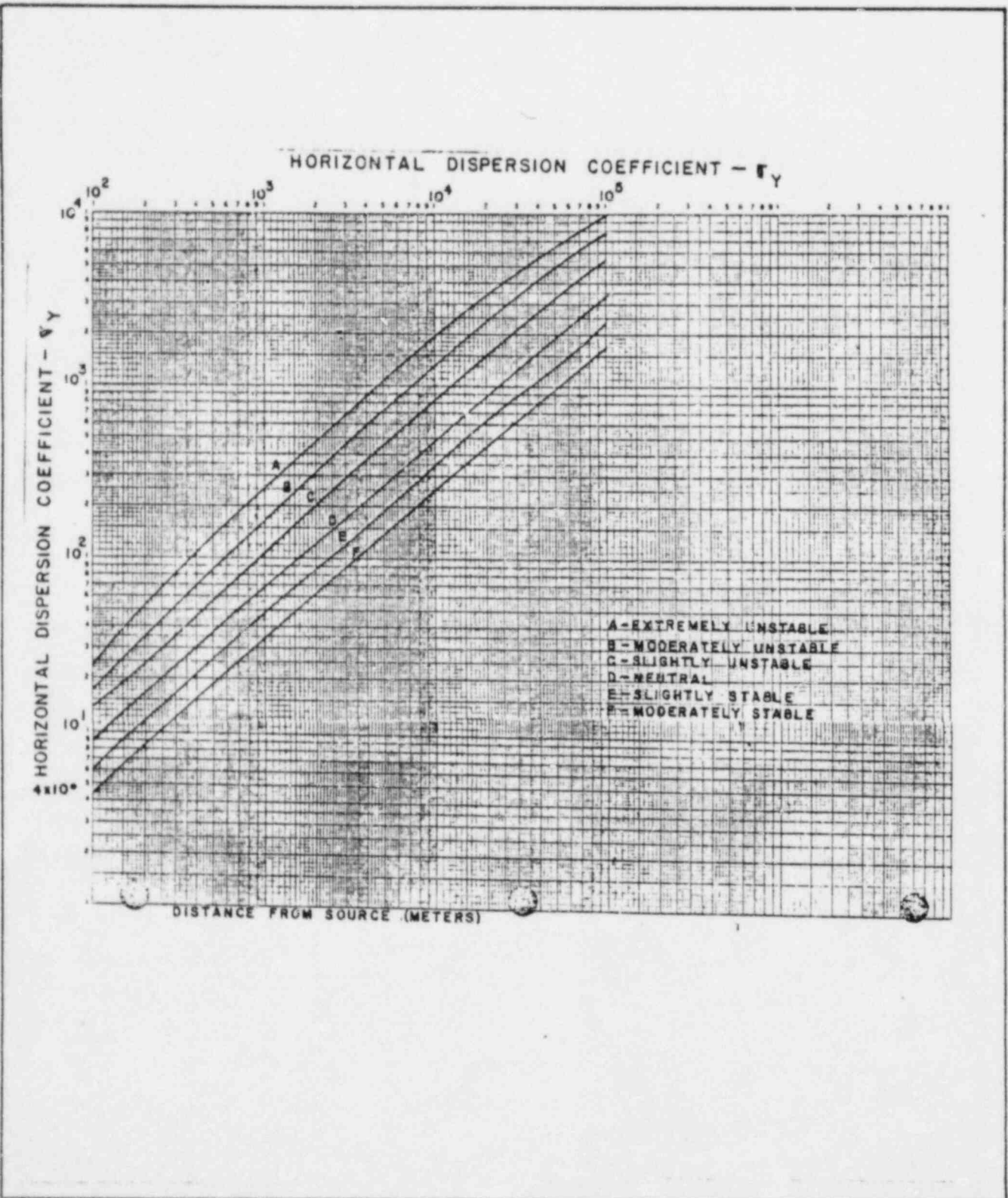
NUMBER EPIP-4.10	ATTACHMENT TITLE	REVISION 03
ATTACHMENT 1	X/Q (SEC/M ³) WIND SPEED = 1 MILE PER HOUR	PAGE 1 of 2

DISTANCE (MILES)	A	B	C	D	E	F	G
Site Boundary	1.84 E-6	1.65 E-5	5.98 E-5	1.77 E-4	3.46 E-4	7.26 E-4	1.40 E-3
1.00	1.25 E-6	1.10 E-5	4.50 E-5	1.40 E-4	2.80 E-4	5.90 E-4	1.20 E-3
1.25	1.00 E-6	6.30 E-6	3.10 E-5	9.80 E-5	2.00 E-4	4.50 E-4	9.80 E-4
1.50	8.50 E-7	3.90 E-6	2.20 E-5	7.40 E-5	1.60 E-4	3.50 E-4	8.00 E-4
1.75	7.40 E-7	2.60 E-6	1.70 E-5	5.90 E-5	1.30 E-4	2.80 E-4	6.80 E-4
2.00	6.60 E-7	1.80 E-6	1.40 E-5	4.80 E-5	1.00 E-4	2.40 E-4	5.80 E-4
2.25	5.90 E-7	1.30 E-6	1.10 E-5	4.00 E-5	8.80 E-5	2.00 E-4	5.00 E-4
2.50	5.40 E-7	9.90 E-7	9.30 E-6	3.40 E-5	7.60 E-5	1.80 E-4	4.40 E-4
2.75	4.90 E-7	7.60 E-7	7.90 E-6	2.90 E-5	6.60 E-5	1.50 E-4	3.90 E-4
3.00	4.60 E-7	5.90 E-7	6.90 E-6	2.60 E-5	5.90 E-5	1.40 E-4	3.50 E-4
3.25	4.20 E-7	5.60 E-7	6.00 E-6	2.30 E-5	5.30 E-5	1.20 E-4	3.20 E-4
3.50	4.00 E-7	5.30 E-7	5.30 E-6	2.00 E-5	4.80 E-5	1.10 E-4	2.90 E-4
3.75	3.70 E-7	4.90 E-7	4.70 E-6	1.80 E-5	4.30 E-5	1.00 E-4	2.70 E-4
4.00	3.50 E-7	4.70 E-7	4.20 E-6	1.70 E-5	4.00 E-5	9.30 E-5	2.50 E-4
4.25	3.30 E-7	4.40 E-7	3.80 E-6	1.50 E-5	3.70 E-5	8.60 E-5	2.30 E-4
4.50	3.20 E-7	4.20 E-7	3.50 E-6	1.40 E-5	3.40 E-5	8.00 E-5	2.10 E-4
4.75	3.00 E-7	4.00 E-7	3.20 E-6	1.30 E-5	3.20 E-5	7.40 E-5	2.00 E-4
5.00	2.90 E-7	3.80 E-7	2.90 E-6	1.20 E-5	2.90 E-5	7.00 E-5	1.90 E-4
5.25	2.80 E-7	3.60 E-7	2.70 E-6	1.10 E-5	2.80 E-5	6.50 E-5	1.70 E-4
5.50	2.60 E-7	3.50 E-7	2.50 E-6	1.00 E-5	2.60 E-5	6.10 E-5	1.60 E-4
5.75	2.50 E-7	3.40 E-7	2.30 E-6	9.80 E-6	2.40 E-5	5.80 E-5	1.60 E-4

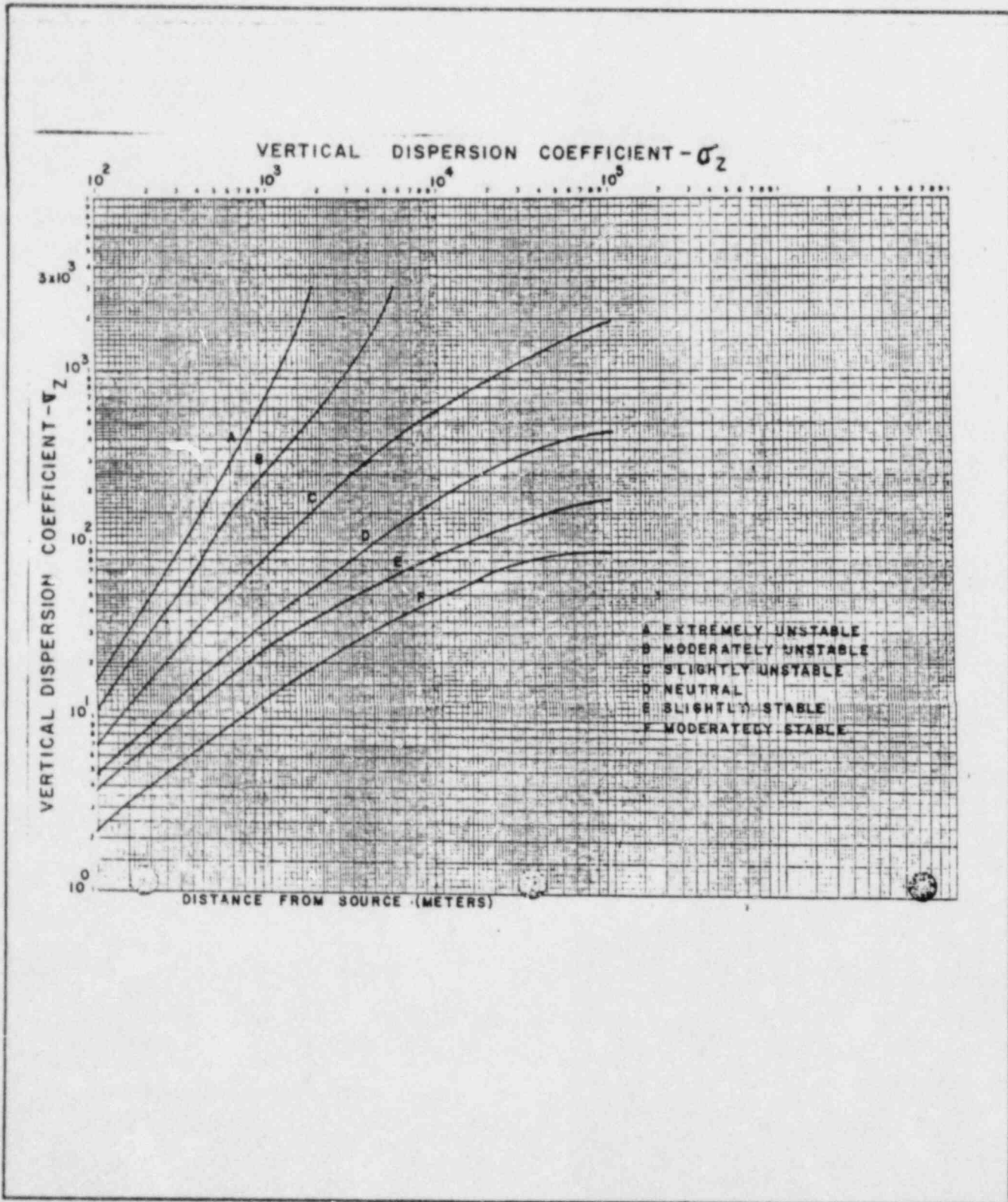
NUMBER EPIP-4.10	ATTACHMENT TITLE	REVISION 03
ATTACHMENT 1	X/Q (SEC/M ³) WIND SPEED = 1 MILE PER HOUR	PAGE 2 of 2

<u>DISTANCE</u> (MILES)	A	B	C	D	E	F	G
6.00	2.40 E-7	3.20 E-7	2.10 E-6	9.20 E-6	2.30 E-5	5.50 E-5	1.50 E-4
6.25	2.40 E-7	3.10 E-7	2.00 E-6	8.60 E-6	2.20 E-5	5.20 E-5	1.40 E-4
6.50	2.30 E-7	3.00 E-7	1.90 E-6	8.10 E-6	2.10 E-5	5.00 E-5	1.30 E-4
6.75	2.20 E-7	2.90 E-7	1.80 E-6	7.70 E-6	2.00 E-5	4.70 E-5	1.30 E-4
7.00	2.10 E-7	2.80 E-7	1.70 E-6	7.30 E-6	1.90 E-5	4.50 E-5	1.20 E-4
7.25	2.10 E-7	2.70 E-7	1.60 E-6	6.90 E-6	1.80 E-5	4.30 E-5	1.20 E-4
7.50	2.00 E-7	2.60 E-7	1.50 E-6	6.60 E-6	1.70 E-5	4.10 E-5	1.10 E-4
7.75	1.90 E-7	2.60 E-7	1.40 E-6	6.30 E-6	1.70 E-5	4.00 E-5	1.10 E-4
8.00	1.90 E-7	2.50 E-7	1.30 E-6	6.01 E-6	1.60 E-5	3.80 E-5	1.00 E-4
8.25	1.80 E-7	2.40 E-7	1.30 E-6	5.80 E-6	1.50 E-5	3.70 E-5	1.00 E-4
8.50	1.80 E-7	2.40 E-7	1.20 E-6	5.50 E-6	1.50 E-5	3.50 E-5	9.60 E-5
8.75	1.70 E-7	2.30 E-7	1.10 E-6	5.30 E-6	1.40 E-5	3.40 E-5	9.30 E-5
9.00	1.70 E-7	2.20 E-7	1.10 E-6	5.10 E-6	1.40 E-5	3.30 E-5	9.00 E-5
9.25	1.70 E-7	2.20 E-7	1.00 E-6	4.90 E-6	1.30 E-5	3.20 E-5	8.70 E-5
9.50	1.60 E-7	2.10 E-7	1.00 E-6	4.70 E-6	1.30 E-5	3.10 E-5	8.40 E-5
9.75	1.60 E-7	2.10 E-7	9.00 E-7	4.50 E-6	1.20 E-5	3.00 E-5	8.10 E-5
10.00	1.50 E-7	2.00 E-7	9.20 E-7	4.40 E-6	1.20 E-5	2.90 E-5	7.90 E-5

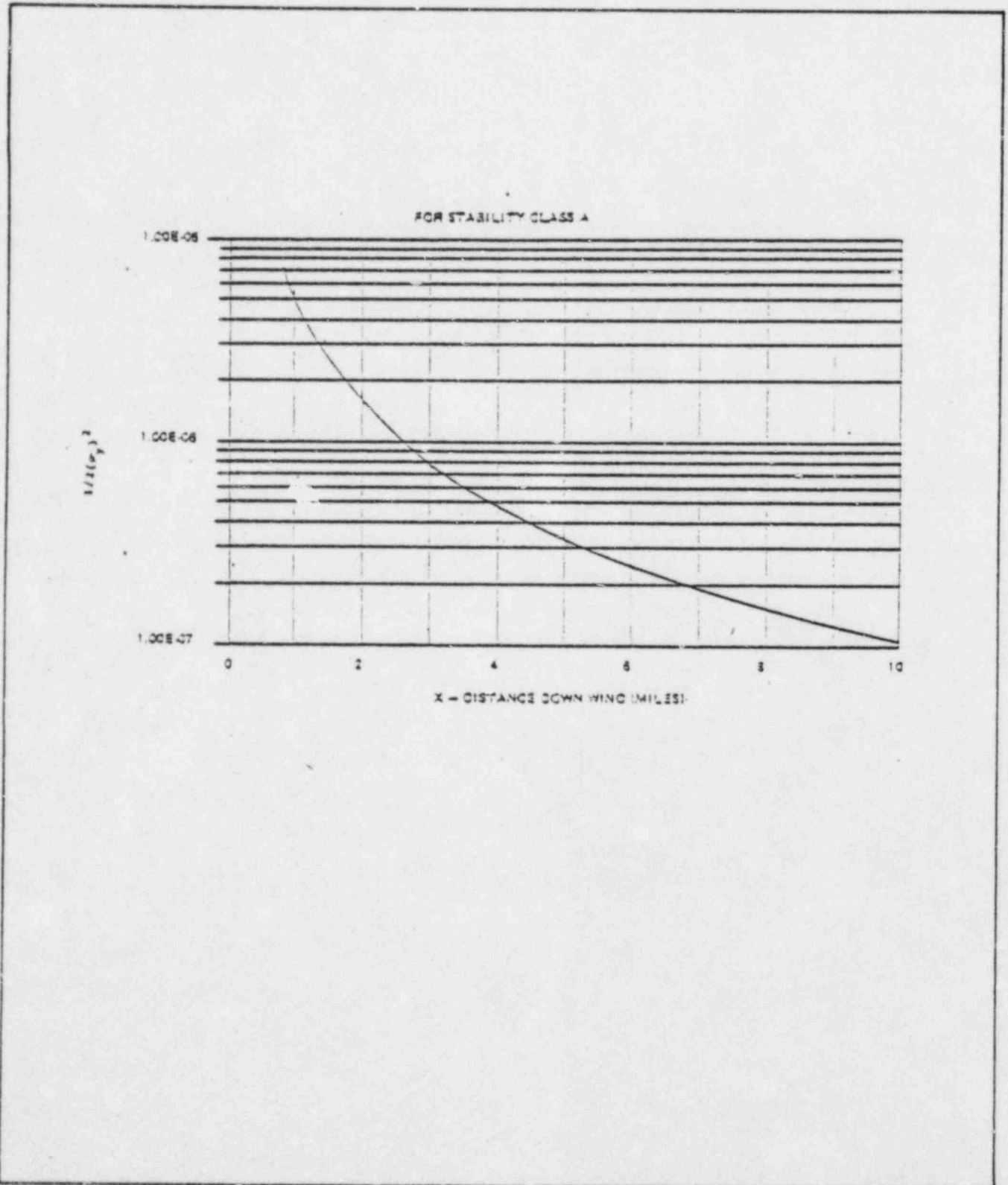
<p>NUMBER EPIP-4.10</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>	<p>HORIZONTAL DISPERSION COEFFICIENT (δy)</p>	<p>PAGE 1 of 1</p>



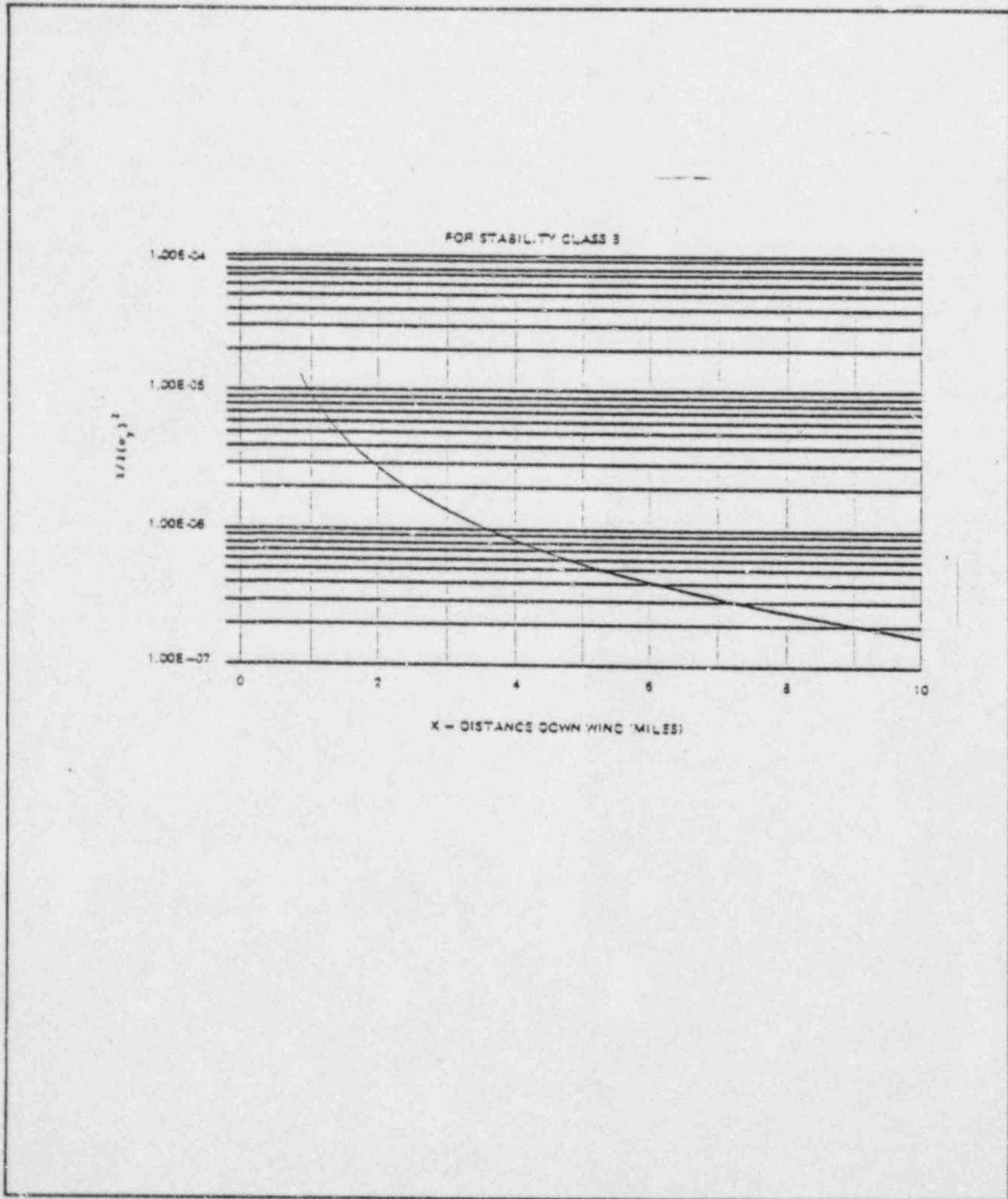
NUMBER EPIP-4.10	ATTACHMENT TITLE 	REVISION 03
ATTACHMENT 3	VERTICAL DISPERSION COEFFICIENT (δx)	PAGE 1 of 1



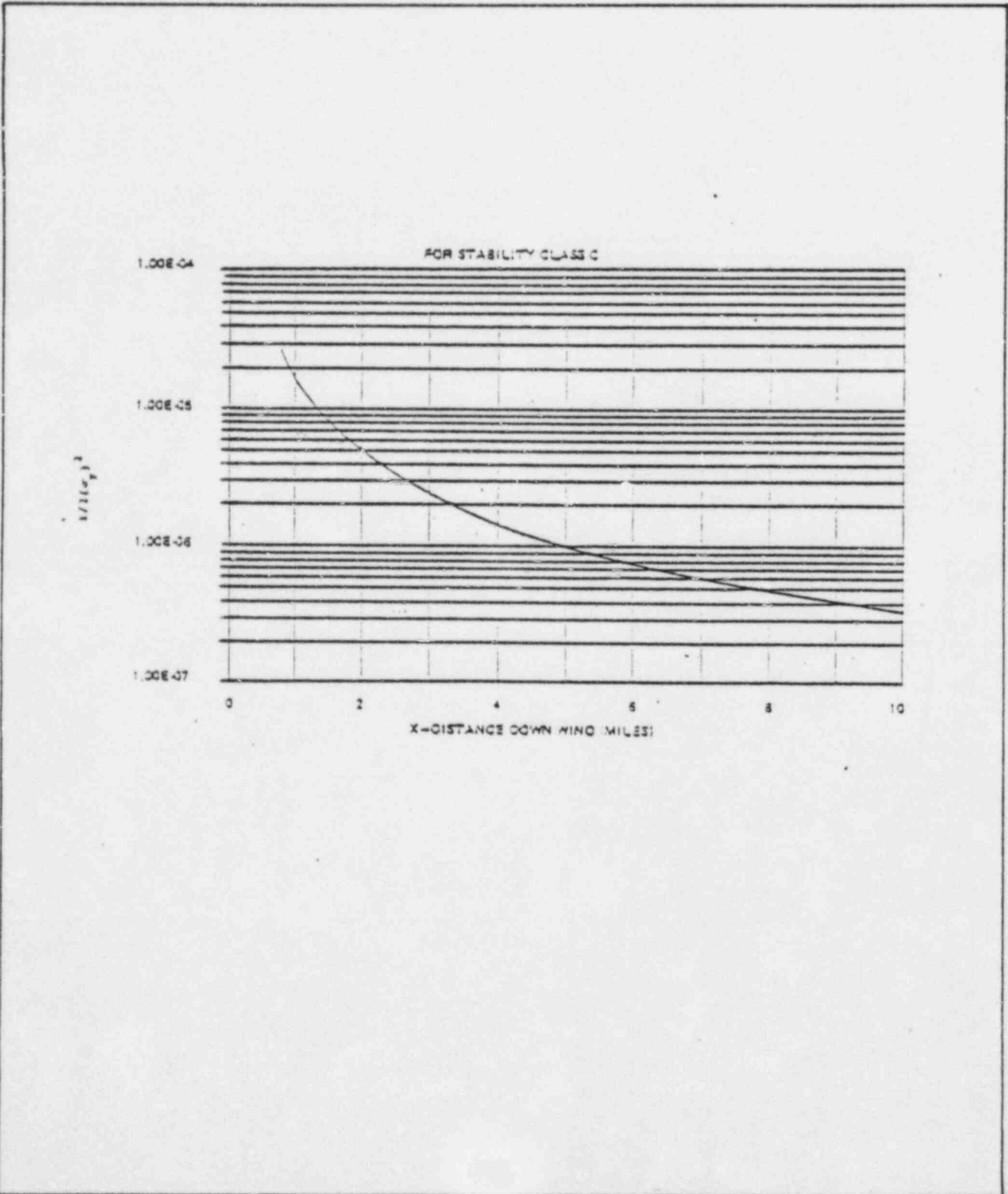
NUMBER EPIP-4.10	ATTACHMENT TITLE $1/(2(\delta y)^2)$ FOR STABILITY CLASS A	REVISION 03
ATTACHMENT 4		PAGE 1 of 7



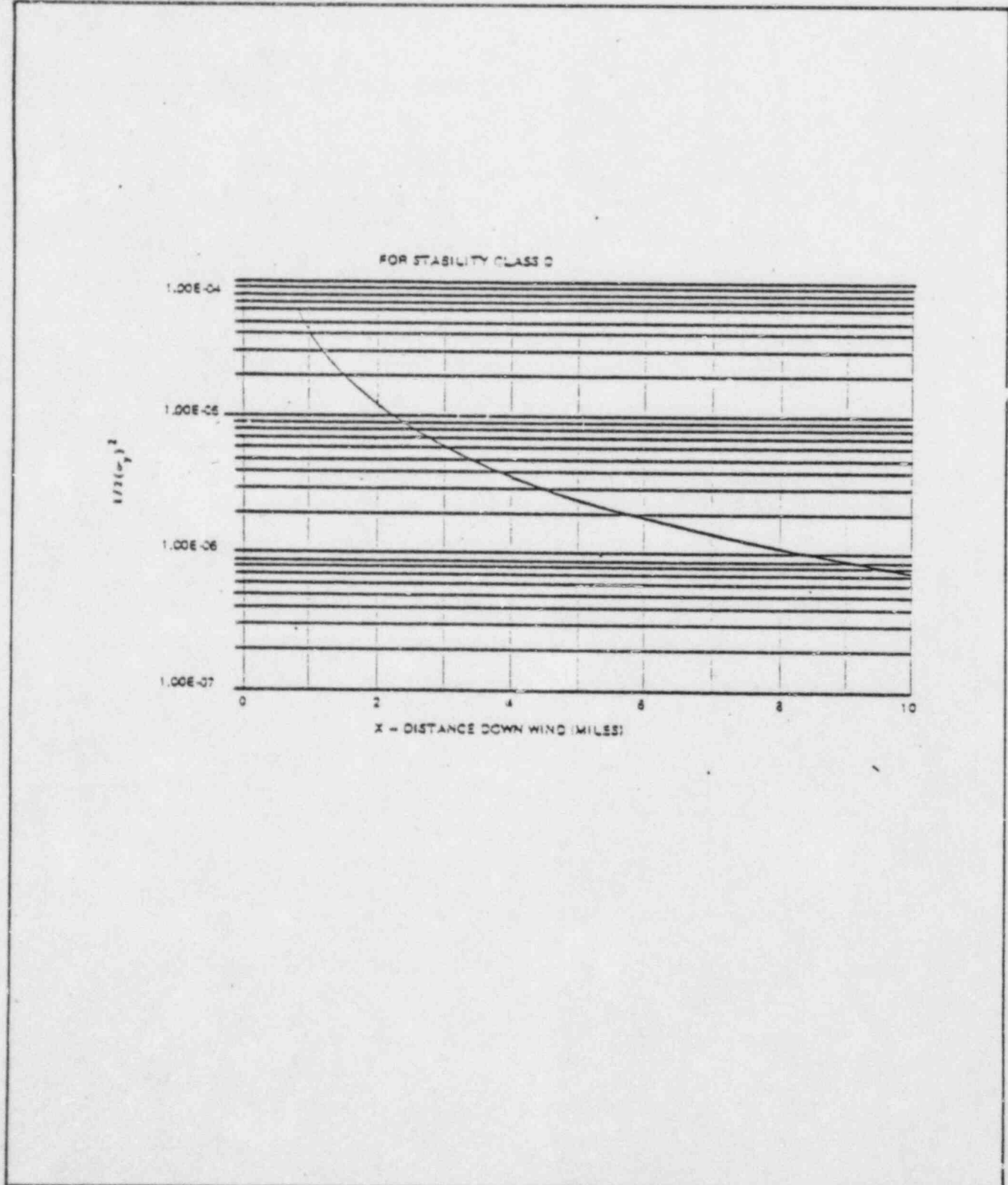
<p>NUMBER EPIP-4.10</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION - 03</p>
<p>ATTACHMENT 4</p>	<p>$1/(2(\delta y)^2)$ FOR STABILITY CLASS B</p>	<p>PAGE 2 of 7</p>



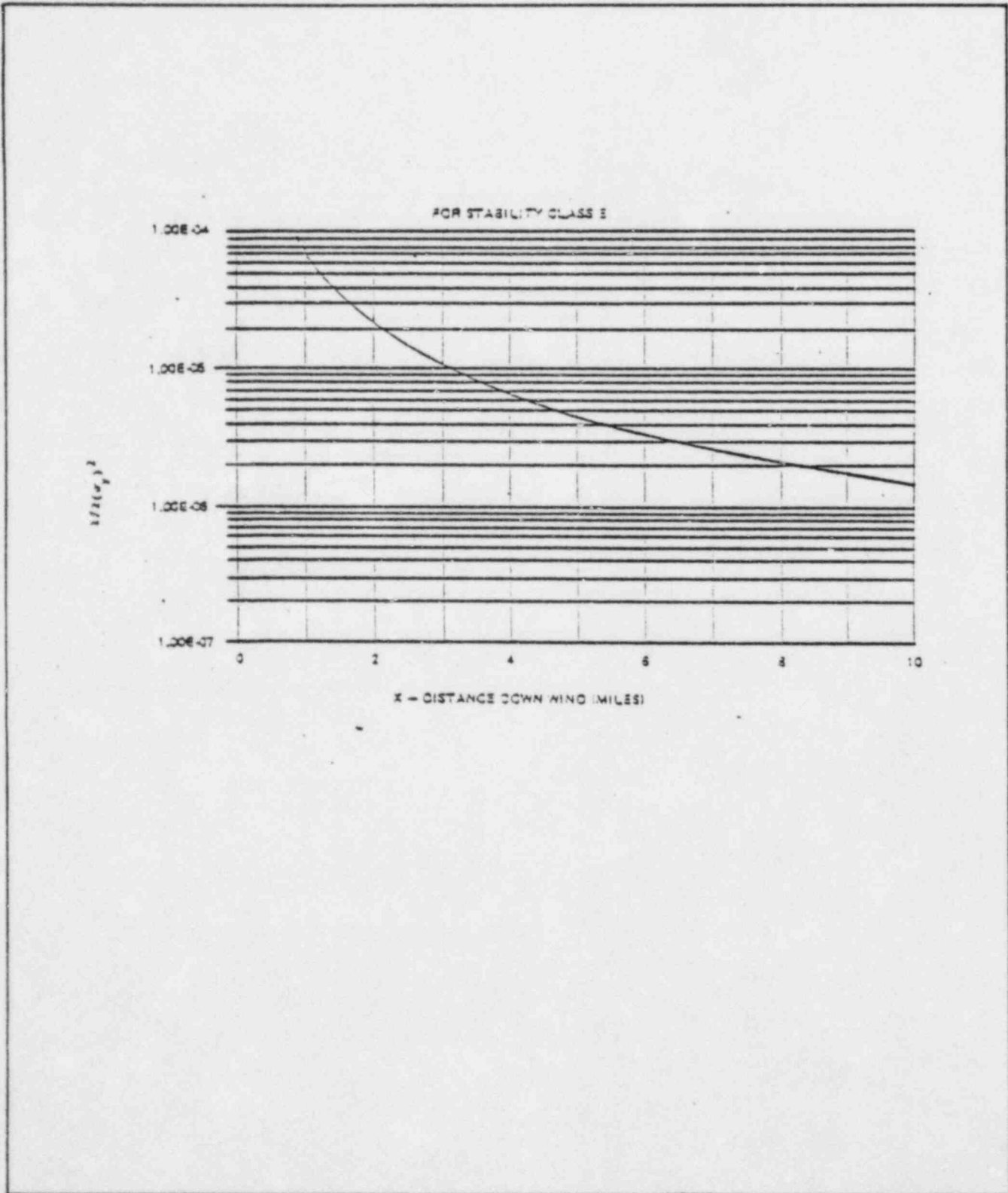
<p>NUMBER EPIP-4.10</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>	<p>$1/(2(\delta y)^2)$ FOR STABILITY CLASS C</p>	<p>PAGE 3 of 7</p>



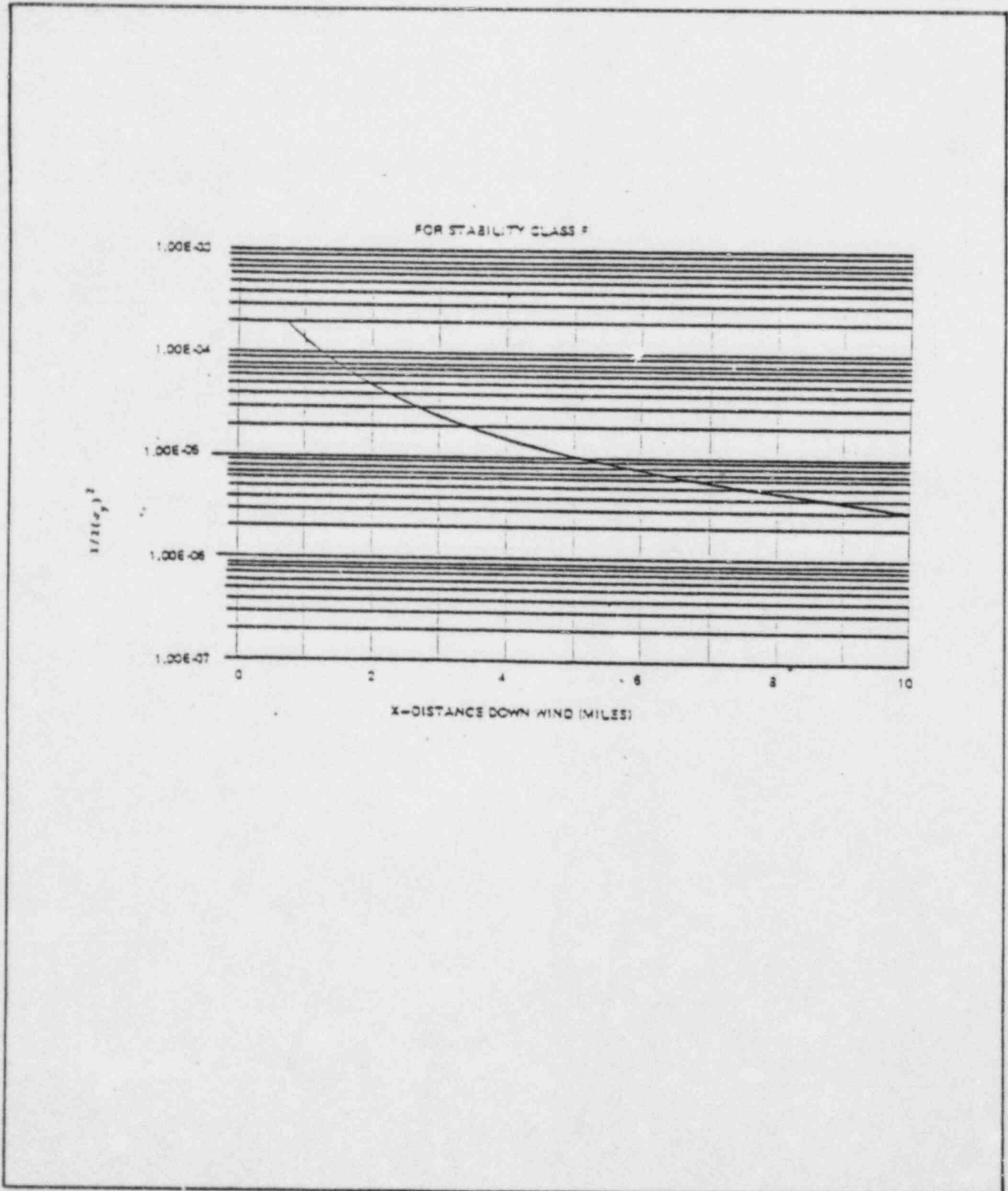
<p>NUMBER EPIP-4.10</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>	<p>$1/(2(\delta y)^2)$ FOR STABILITY CLASS D</p>	<p>PAGE 4 of 7</p>



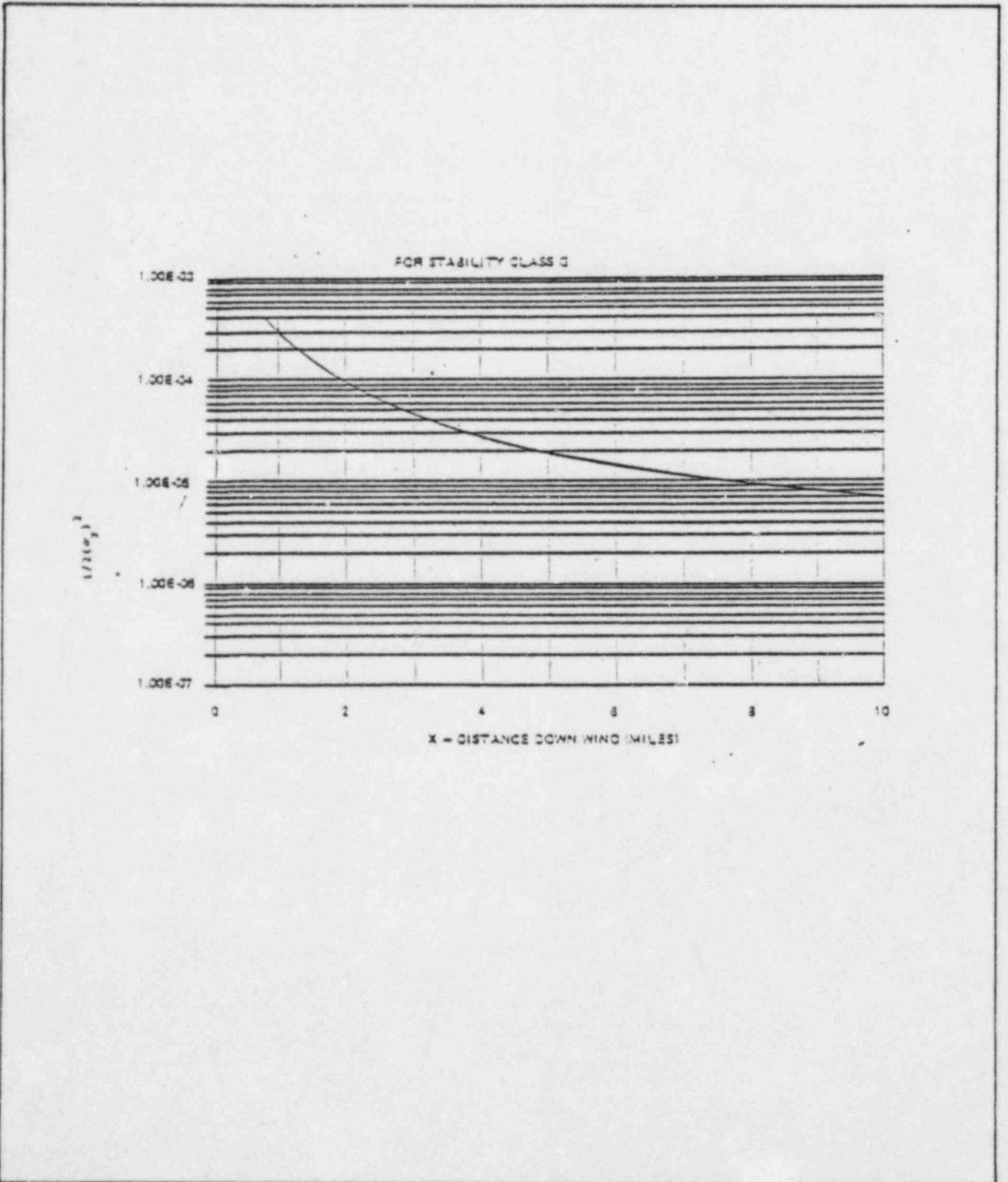
<p>NUMBER EPIP-4.10</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>	<p>$1/(2(\delta y)^2)$ FOR STABILITY CLASS E</p>	<p>PAGE 5 of 7</p>



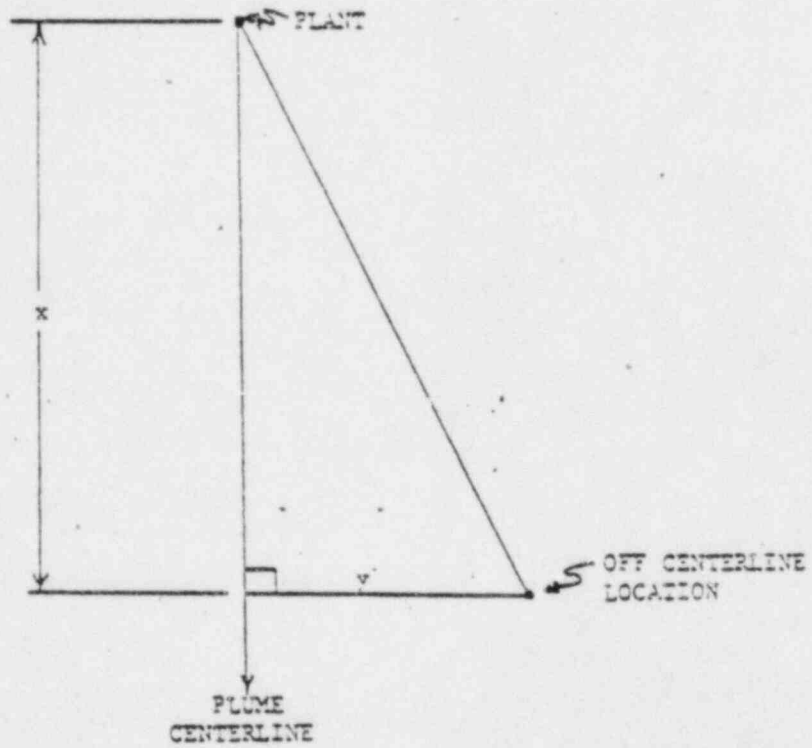
<p>NUMBER EPIP-4.10</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>	<p>$1/(2(\delta y)^2)$ FOR STABILITY CLASS F</p>	<p>PAGE 6 of 7</p>



<p>NUMBER EPIP-4.10</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>	<p>$1/(2(\delta y)^2)$ FOR STABILITY CLASS G</p>	<p>PAGE 7 of 7</p>



NUMBER EPIP-4.10	ATTACHMENT TITLE	REVISION 03
ATTACHMENT 5	OFFCENTER LINE X/Q	PAGE 1 of 1



VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.11	PROCEDURE TITLE FOLLOW-UP OFFSITE RELEASE ASSESSMENT (With 8 Attachments)	REVISION 03 PAGE 1 of 9
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PURPOSE

Accurately assess the percent technical specifications OR the offsite whole body and thyroid dose rates, using monitor or sample data.

USER

Radiological Assessment Director OR members of Dose Assessment Team.

ENTRY CONDITIONS

Any of the following:

- 1) Activation by EPIP-4.01, Radiological Assessment Director Controlling Procedure.
- 2) Activation by EPIP-4.03, Dose Assessment Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
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NUMBER EPIP-4.11	PROCEDURE TITLE FOLLOW-UP OFFSITE RELEASE ASSESSMENT	REVISION 03 PAGE 3 of 9
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
2.	(CONTINUED)	
	6) Obtain the number of <u>CIRCULATING WATER PUMPS</u> running.	
	7) Obtain the <u>GPM</u> of the release from Operations	
	8) Determine the % Tech Spec:	
	$\frac{\text{Substep 3 X GPM X } 4.19 \text{ E-4}}{\text{\# of Circulating Water Pumps}} = \% \text{ T.S.}$	
	9) <u>GO TO Step 7</u>	
	c) <u>IF GASEOUS RELEASE</u>	
	1) Obtain <u>SAMPLE RESULTS</u> and log activity on Attachment <u>2</u>	
	2) Determine percent Tech Specs for <u>NOBLE GASES</u> from equation <u>1</u> , Attachment <u>2</u>	2) <u>GO TO Step 3.</u>
	3) Determine percent Tech Specs for <u>SKIN DOSE</u> from equation <u>2</u> , Attachment <u>2</u>	
	4) Determine percent Tech Specs for <u>RADIOIODINE AND</u> for <u>PARTICULATES</u> with halflives <u>GREATER THAN 8 DAYS</u> by summing the activity (uCi/ml) and using equation <u>3</u> on Attachment <u>2</u>	
	5) <u>GO TO Step 7</u>	

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.11	FOLLOW-UP OFFSITE RELEASE ASSESSMENT	03
		PAGE 4 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	DETERMINE OFFSITE DOSE WITH NORMAL RANGE MONITORS	
	a) Determine Offsite Dose with Normal Range Monitor <u>IF</u> sample analysis is <u>NOT</u> available	a) <u>GO TO</u> Step <u>6</u> <u>IF</u> sample analysis of release <u>IS</u> available.
	b) <u>IF</u> release is through the Ventilation System <u>OR</u> Air Ejector	b) <u>GO TO</u> Step <u>4</u> <u>IF</u> monitors are <u>OFFSCALE</u>
	<u>AND</u> Any of the following monitors are <u>ONSCALE</u> , continue with this instruction:	<u>OR</u> Release is through the MAIN STEAM
	1) VENT VENT A (VG-104)	
	<u>OR</u>	
	2) VENT VENT B (VG-113)	
	<u>OR</u>	
	3) PROCESS VENT (GW-102)	
	<u>OR</u>	
	4) AIR EJECTOR (SV-121, 221)	
	c) Obtain the following information and log on Attachment <u>3</u>	
	1) <u>DATE</u> , <u>TIME</u> , <u>AND MONITOR</u> of interest	
	2) <u>CPM</u> of monitor of interest from Radiological Assessment Director	

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.11	FOLLOW-UP OFFSITE RELEASE ASSESSMENT	03
		PAGE
		5 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3. (CONTINUED)

3) FLOW RATE (CFM)4) Obtain X/Q for site boundary from EPIP-4.10, Determination of X/Qd) Obtain the CONVERSION FACTOR for monitor of interest and log on Attachment 3MONITORCONVERSION FACTOR

1) VG-104	1.80 E-5
2) VG-113	7.33 E-7
3) GW-102	1.80 E-5
4) SV-121, 221	4.61 E-2

e) Perform the following calculation to determine mR/HR

$$\text{CPM} \times \text{CFM} \times (\text{X/Q}) \times \text{CONVERSION FACTOR} = \frac{\text{mR}}{\text{HR}}$$

1) Log results on Attachment 3f) GO TO STEP 6

4. DETERMINE OFFSITE DOSE WITH PROCESS OR VENT VENT HIGH RANGE MONITORS

a) IF release is through the Process Vent OR Vent Venta) IF sample analysis is available, GO TO Step 6.

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.11	FOLLOW-UP OFFSITE RELEASE ASSESSMENT	03
		PAGE
		6 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. (CONTINUED)

AND

High Range Monitors are on scale

OR

If release is through the Main Steam, GO TO Step 5.

AND

Sample Analysis is not yet available,

OR

If monitors are not onscale GO TO Step 7

Continue with this instruction

- b) Fill in the DATE, TIME AND MONITOR of interest on Attachment 4
- c) Obtain the mR/HR on monitors from Radiological Assessment Director
 - 1) Convert mR/HR to uCi/cc using Attachment 5.
 - 2) Log uCi/cc on Attachment 4
- d) Obtain the FLOW RATE OF RELEASE (CFM)
 - 1) Log on Attachment 4
- e) Obtain X/Q FOR Site Boundary from EPIP-4.10, Determination of X/Q
 - 1) Log on Attachment 4
- f) Perform the following calculation on Attachment 4 to obtain mR/HR

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.11	FOLLOW-UP OFFSITE RELEASE ASSESSMENT	03
		PAGE
		7 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	(CONTINUED) $\mu\text{Ci/cc} \times \text{CFM} \times (\text{X/Q}) \times 8.50\text{E-1} = \frac{\text{mR}}{\text{HR}}$ g) <u>GO TO</u> Step <u>6</u>	
5.	DETERMINE OFFSITE DOSES WITH <u>MAIN STEAM OR AFPT MONITORS</u> a) Log <u>DATE, TIME, AND MONITOR</u> of interest on Attachment <u>6</u> b) Obtain <u>mR/HR</u> and log on Attachment <u>6</u> c) Obtain <u>FLOW RATE</u> 1) <u>IF MAIN STEAM SAFETY</u> <u>VALVE</u> lifts OR may potentially lift, deter- mine the NUMBER OF VALVES LIFTED from Radiological Assessment Director <u>AND</u> the FLOW RATE as follows:	1) <u>IF</u> no valve has lifted, project release using only <u>one</u> valve.
	$\text{NUMBER OF VALVES LIFTED} \times 2.62 = \text{m}^3/\text{sec}$	
	2) <u>IF</u> the <u>AUXILIARY FEED PUMP</u> <u>TURBINE</u> has <u>NOT</u> been isolated determine FLOW RATE from following: UNIT #1 = 3.967 m ³ /sec UNIT #2 = 4.216 m ³ /sec	2) <u>IF</u> main steam to the turbine is isolated, no release is likely through this pathway. Continue with this step.

NUMBER EPIP-4.11	PROCEDURE TITLE FOLLOW-UP OFFSITE RELEASE ASSESSMENT	REVISION: 03
		PAGE 8 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

5. (CONTINUED)

- d) Determine the DOSE CONVERSION FACTOR from Attachment 7 and log on Attachment 6
- e) Determine the X/Q for Site Boundary from EPIP-4.10, Determination of X/Q and log on Attachment 6
- f) Perform the following calculation to determine mR/HR:

$$\text{mR/HR (Monitor)} \times \text{Flow Rate (m}^3\text{/SEC)} \times \frac{\text{Dose Conversion Factor}}{\text{Factor}} \times (X/Q) = \frac{\text{mR}}{\text{HR}}$$

6. DETERMINE THYROID DOSE RATE

- a) Determine the WHOLE BODY DOSE RATE (mR/HR from Step 3, Step 4 or Step 5.)
- b) Determine CONVERSION FACTOR versus type of accident listed on Attachment 8.
- c) Multiply to determine THYROID DOSE RATE
Step a x Step b = mR/HR

7. DETERMINE OFFSITE DOSE RATE FROM SAMPLE RESULTS

- a) Obtain EQUIVALENT ACTIVITY (Ci/SEC) for I-131 and Xe-133 from EPIP-4.09, Source Term Assessment:
- b) Determine X/Q for Site Boundary from EPIP-4.10, Determination of X/Q

<p>NUMBER EPIP-4.11</p>	<p>PROCEDURE TITLE FOLLOW-UP OFFSITE RELEASE ASSESSMENT</p>	<p>REVISION 03 PAGE 9 of 9</p>
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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c) Determine DOSE RATE

- 1) THYROID (EQUIVALENT I-131)

$$\text{Ci/SEC} \times \text{X/Q} \times \underline{1.85 \text{ E} + 9} = \text{mR/HR}$$

- 2) WHOLE BODY (EQUIVALENT Xe-133)

$$\text{Ci/SEC} \times \text{X/Q} \times \underline{4.20 \text{ E} + 4} = \text{mR/HR}$$

8. RETURN TO CONTROLLING PROCEDURE:

- a) Upon completion of this procedure RETURN to EPIP-4.03, Dose Assessment Controlling Procedure

9. PROCEDURE COMPLETION:

- a) Completed By: _____
Date: _____
Time _____

END

NUMBER EPIP-4.11	ATTACHMENT TITLE % TECH SPEC LIQUID	REVISION 03
ATTACHMENT 1	WORKSHEET	PAGE 1 of 1

ISOTOPE	<u>ACTIVITY</u> (uCi/ml)i	UNRESTRICTED-MPC	<u>(uCi/ml)i</u> MPCi
H-3	_____	3.00 E-3	_____
Kr-85	_____	4.00 E-5	_____
Kr-85m	_____	4.00 E-5	_____
Kr-87	_____	4.00 E-5	_____
Kr-88	_____	4.00 E-5	_____
Xe-131m	_____	4.00 E-5	_____
Xe-133	_____	4.00 E-5	_____
Xe-133m	_____	4.00 E-5	_____
Xe-135	_____	4.00 E-5	_____
Mn-54	_____	1.00 E-4	_____
Mn-56	_____	1.00 E-4	_____
Fe-59	_____	5.00 E-5	_____
Co-58	_____	9.00 E-5	_____
Co-60	_____	3.00 E-5	_____
Cr-51	_____	2.00 E-3	_____
Zr-95	_____	6.00 E-5	_____
Mo-99	_____	4.00 E-5	_____
Ru-103	_____	1.00 E-5	_____
Te-132	_____	2.00 E-5	_____
Cs-134	_____	9.00 E-6	_____
Cs-136	_____	6.00 E-5	_____
Cs-137	_____	2.00 E-5	_____
Ba-140	_____	2.00 E-5	_____
Ce-144	_____	1.00 E-5	_____
I-131	_____	3.00 E-7	_____
I-132	_____	8.00 E-6	_____
I-133	_____	1.00 E-6	_____
I-134	_____	2.00 E-5	_____
I-135	_____	4.00 E-6	_____

$$\sum \frac{(uCi/ml)i}{MPCi} =$$

NUMBER EPIP-4.11	ATTACHMENT TITLE % TECH SPEC GASEOUS WORKSHEET	REVISION 03
ATTACHMENT 2		PAGE 1 of 1

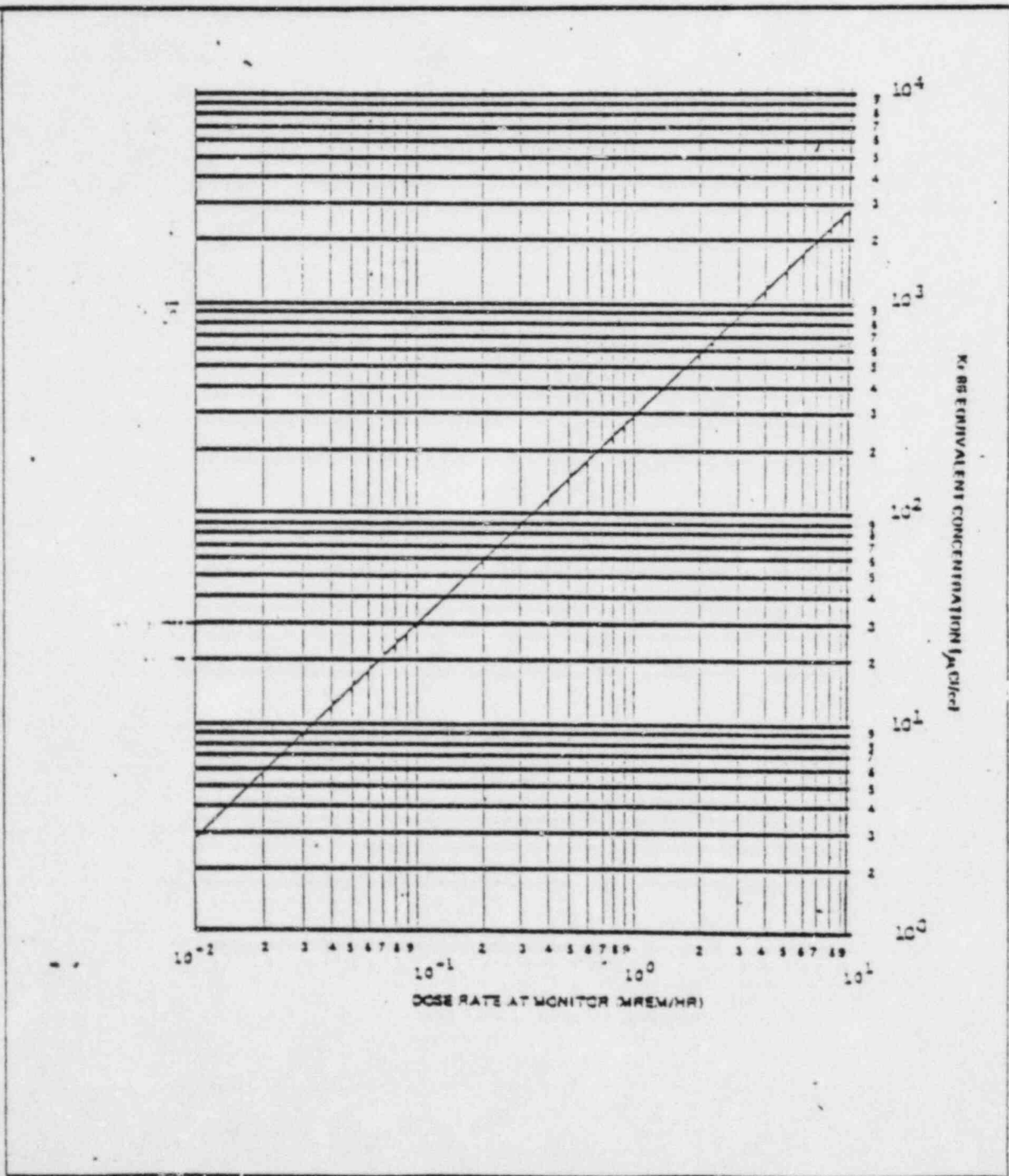
ISOTOPE	ACTIVITY (uCi/ml)	DOSE FACTORS		
		K1	L1	N1
Kr-83M	_____	6.40 E-5	0.00 E+0	3.40 E-3
Kr-85M	_____	7.50 E-1	1.90 E+0	7.80 E-1
Kr-85	_____	9.10 E-3	1.80 E+0	9.70 E-3
Kr-87	_____	2.20 E+0	1.30 E+1	2.40 E+0
Kr-88	_____	5.70 E+0	3.10 E+0	6.00 E+0
Kr-89	_____	7.20 E-1	1.30 E+1	7.60 E-1
Xe-131M	_____	2.70 E-1	6.20 E-1	3.40 E-3
Xe-133M	_____	2.10 E-1	1.30 E+0	2.80 E-1
Xe-133	_____	2.40 E-1	4.00 E-1	3.00 E-1
Xe-135M	_____	8.70 E-1	9.30 E-1	9.30 E-1
Xe-135	_____	1.10 E+0	2.40 E+0	1.20 E+0
Xe-137	_____	1.00 E-1	1.60 E+1	1.10 E-1
Xe-138	_____	2.00 E+0	5.40 E+0	2.10 E+0

1. $\sum [(uCi/ml)_i (k_i)] (CFM) (9.44 E-2) = \% T.S. WHOLE BODY DOSE$

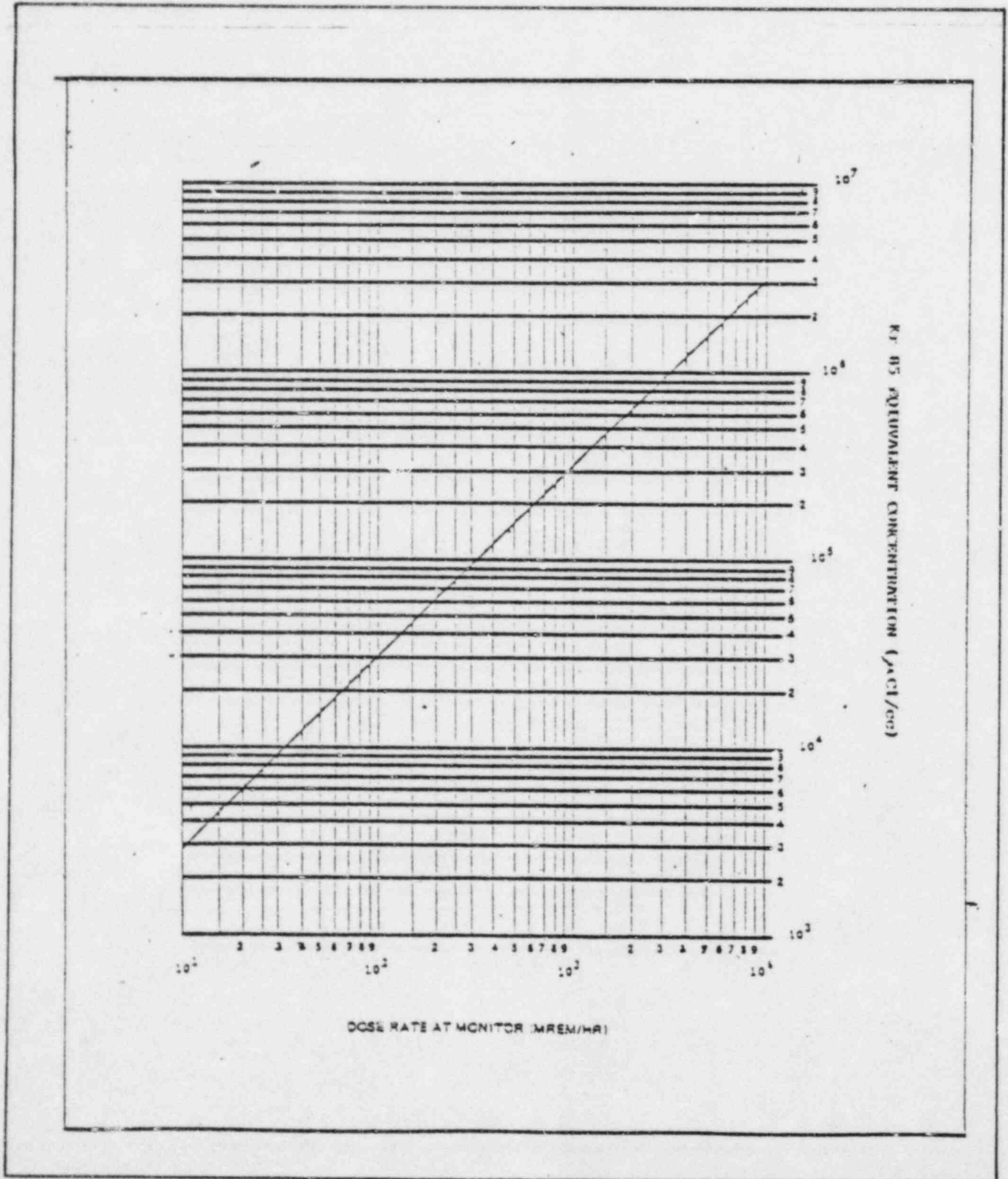
2. $\sum [(uCi/ml)_i (L_i + 1.1 N_i)] (CFM) (1.56 E-2) = \% T.S. SKIN DOSE$

3. $\sum (uCi/ml) (CFM) (1.94 E+4) = \% T.S. RADIOIODINES AND PARTICULATES$

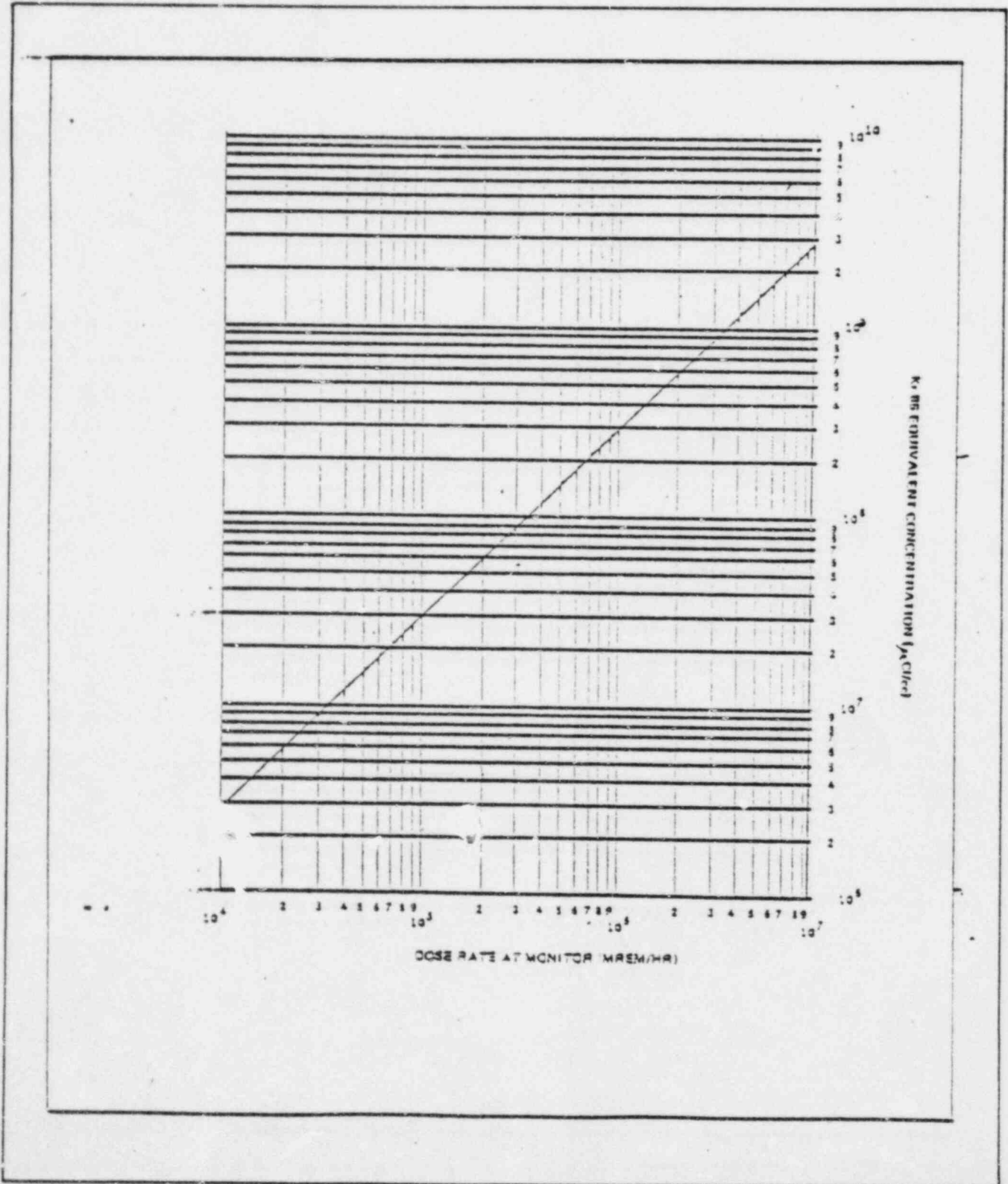
<p>NUMBER EPIP-4.11</p>	<p>ATTACHMENT TITLE PROCESS VENT OR VENT VENT MR/HR (MONITOR) VERSUS $\mu\text{Ci}/\text{ML}$ (RM-GW-173, RM-VG-174, or RM-VG-175)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 5</p>		<p>PAGE 1 of 3</p>



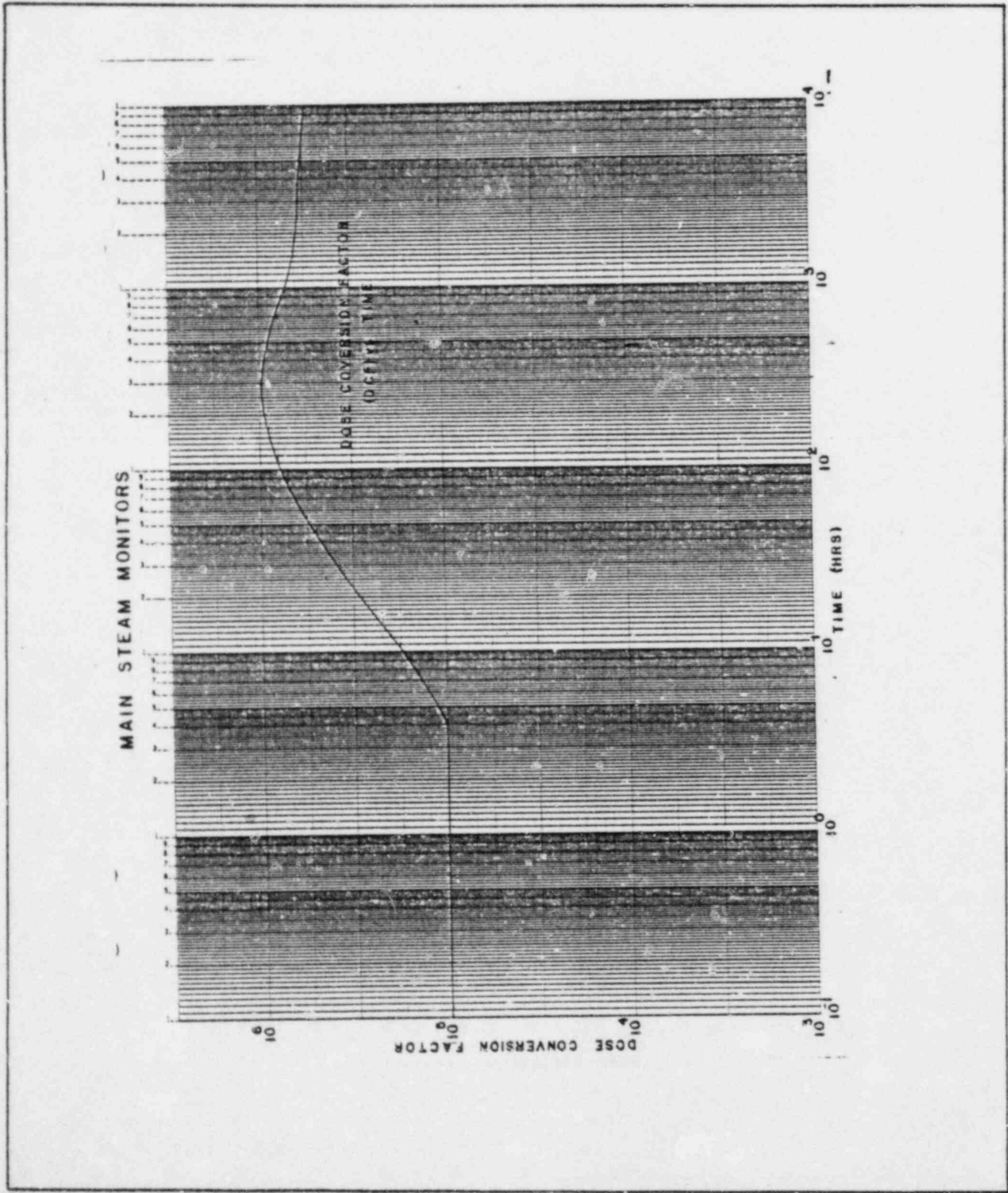
<p>NUMBER EPIP-4.11</p>	<p>ATTACHMENT TITLE PROCESS VENT OR VENT VENT MR/HR (MONITOR) VERSUS $\mu\text{Ci}/\text{ML}$ (RM-GW-173, RM-VG-174, or RM-VG-175)</p>	<p>REVISION 03</p>
<p>ATTACHMENT 5</p>		<p>PAGE 2 OF 3</p>



<p>NUMBER EPIP-4.11</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 5</p>	<p>PROCESS VENT OR VENT VENT MR/HR (MONITOR) VERSUS $\mu\text{Ci}/\text{ML}$ (RM-GW-173, RM-VG-174, or RM-VG-175)</p>	<p>PAGE 3 of 3</p>

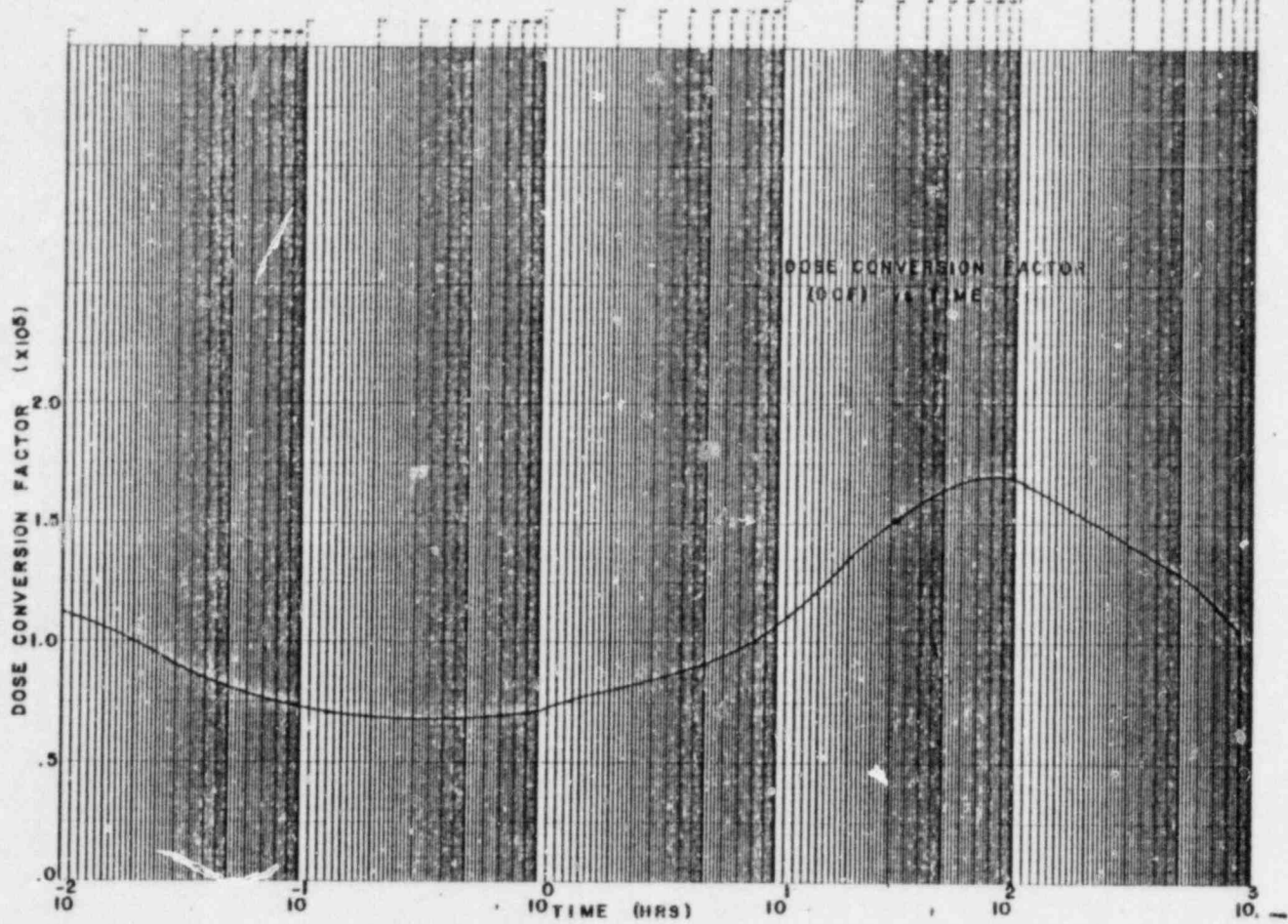


NUMBER EPIP-4.11	ATTACHMENT TITLE DOSE CONVERSION FACTOR	REVISION 03
ATTACHMENT 7	MAIN STEAM	PAGE 1 of 3



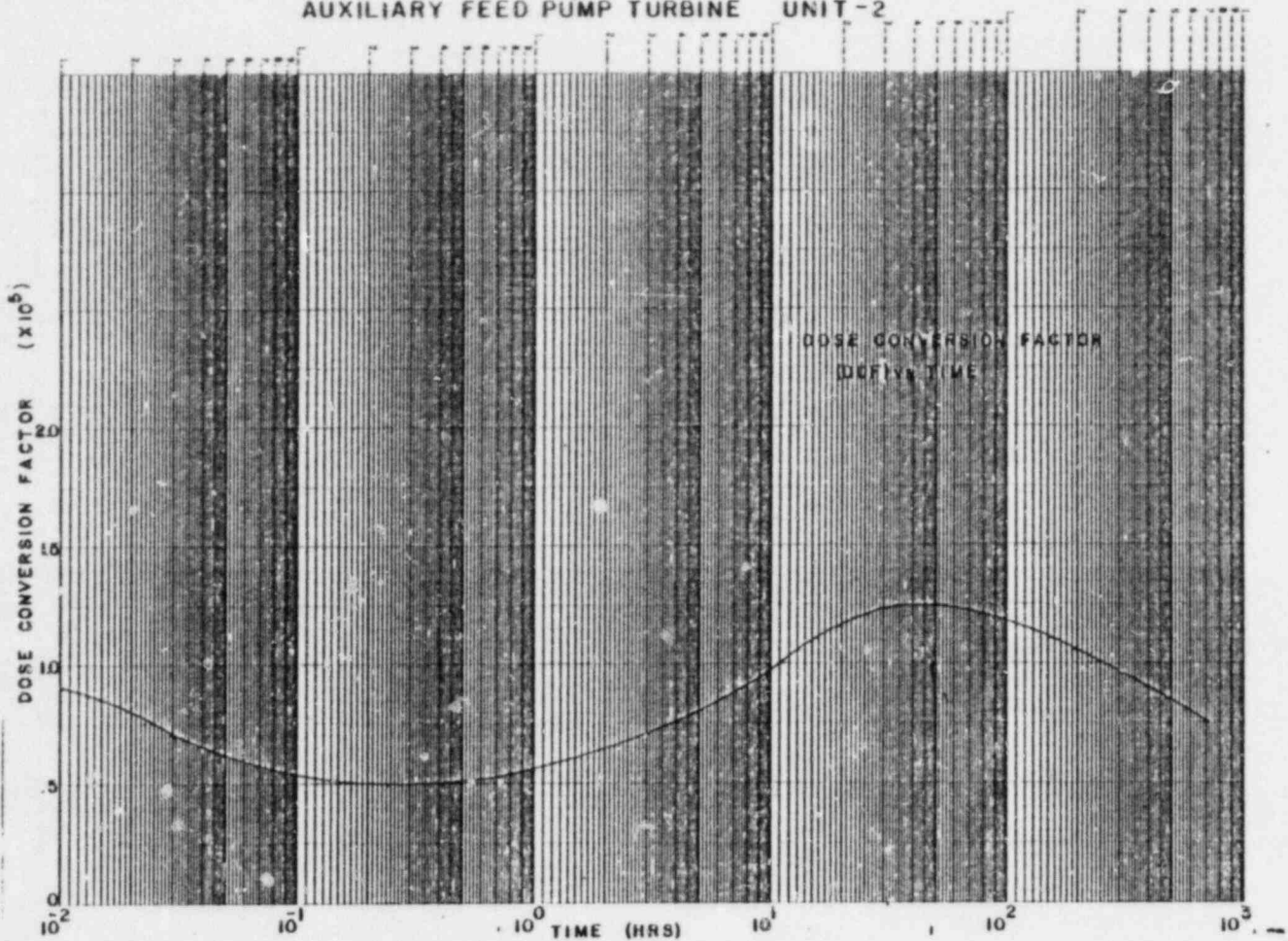
NUMBER EPIP-4.11	ATTACHMENT TITLE DOSE CONVERSION FACTOR AUXILIARY FEED PUMP TURBINE - UNIT #1	REVISION 03
ATTACHMENT 7		PAGE 2 OF 3

AUXILIARY FEED PUMP TURBINE UNIT-1



NUMBER EPIP-4.11	ATTACHMENT TITLE DOSE CONVERSION FACTOR AUXILIARY FEED PUMP TURBINE - UNIT #2	REVISION 03
ATTACHMENT 7		PAGE 3 OF 3

AUXILIARY FEED PUMP TURBINE UNIT-2



<i>NUMBER</i> EPIP-4.11	<i>ATTACHMENT TITLE</i> THYROID DOSE CONVERSION FACTORS	<i>REVISION</i> 03
<i>ATTACHMENT</i> 8		<i>PAGE</i> 1 of 2

<i>ACCIDENT</i>	<i>TIME AFTER ACCIDENT (HOURS)</i>	<i>CONVERSION FACTORS</i>
1. LOCA	0.5	27
	1.0	32
	1.5	36
	2.0	41
	2.5	46
	3.0	51
	3.5	57
	4.0	62
	4.5	69
	5.0	75
	6.5	98
	8.0	123
	10.0	158
	12.5	209
	15.0	258
	24.0	389
	48.0	707
	72.0	758

<i>NUMBER</i> EPIP-4.11	<i>ATTACHMENT TITLE</i> THYROID DOSE CONVERSION FACTORS	<i>REVISION</i> 03
<i>ATTACHMENT</i> 8		<i>PAGE</i> 2 of 2

<i>ACCIDENT</i>	<i>FILTERED (CHARCOAL)</i>	<i>UNFILTERED</i>
2. Primary Gas Release	6.46 E + 0	6.46 E + 1
3. Steam Generator Tube Rupture		2.09 E + 2
4. Fuel Handling Accident	9.30 E + 2	9.30 E + 3
5. Waste Gas Decay Tank	5.37 E - 3	5.37 E - 2
6. Main Steam Line Break (with prior primary to secondary leakage)	3.50 E + 1	3.50 E + 2

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

<i>NUMBER</i>	<i>PROCEDURE TITLE</i>	<i>REVISION</i>
EPIP-4.12	OFFSITE ENVIRONMENTAL MONITORING INSTRUCTIONS (With 3 Attachments)	03
		<i>PAGE</i>
		1 of 7

PURPOSE

Provide guidance to the Dose Assessment Team or the Radiological Assessment Director to direct the Offsite Monitoring Teams to properly 1) confirm radiological release, 2) track release and, 3) determine radiological composition of release.

USER

Dose Assessment Team Members.

ENTRY CONDITIONS

Any one of the following:

1. Release of radioactive materials with a Site or General Emergency condition and EOF is NOT activated.
2. Any other time which the Radiological Assessment Director deems it necessary.
3. Activation by another EPIP.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<i>APPROVAL RECOMMENDED</i> 	<i>APPROVED</i>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<i>DATE</i> 05-24-83
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<p>NUMBER EPIP-4.12</p>	<p>PROCEDURE TITLE OFFSITE ENVIRONMENTAL MONITORING INSTRUCTIONS</p>	<p>REVISION 03</p>
		<p>PAGE 2 of 7</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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1. INITIATE PROCEDURE:

a) BY: _____

DATE: _____

TIME: _____

2. ACTIVATION UPON SITE OR
GENERAL EMERGENCY:

a) The procedure is applicable upon radioactive release and declaration of SITE or GENERAL EMERGENCY

OR

Whenever Radiological Assessment Director deems it necessary

AND

The EOF is NOT MANNED

a) IF EOF is activated and monitoring teams in the field, turn over control of the monitoring teams to the Radiological Assessment Coordinator

1) BRIEF Radiological Assessment Coordinator as to the current location of the monitoring teams and data gathered to, date

2) Inform Monitoring Teams in the field that they are to RECEIVE INSTRUCTIONS and REPORT all DATA to the Radiological Assessment Coordinator at the EOF

3) GO TO Step 14.

NUMBER EPIP-4.12	PROCEDURE TITLE OFFSITE ENVIRONMENTAL MONITORING INSTRUCTIONS	REVISION 03
		PAGE 3 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	REVIEW PROJECTED DATA:	
	<ul style="list-style-type: none"> a) Review the projected release data b) Obtain from the Radiological Assessment Director the current meteorological conditions: <ul style="list-style-type: none"> 1) Wind Speed 2) Wind Direction 3) Stability Class 	
4.	ASSESS MONITORING NEEDS:	
	<ul style="list-style-type: none"> a) Initially only <u>ONE</u> monitoring team may be available <ul style="list-style-type: none"> 1) Use first monitoring team to initially CONFIRM THE RELEASE, THE DIRECTION AND RADIOLOGICAL COMPOSITION b) Minimum of <u>TWO</u> monitoring teams is desirable <ul style="list-style-type: none"> 1) Locate one team NEAR SITE and the other downwind at a DISTANCE FROM PLANT 	<ul style="list-style-type: none"> a) Staff monitoring teams as manpower becomes available <u>GO TO Step b</u>
5.	ASSESS MONITORING ACTIONS:	
	<ul style="list-style-type: none"> a) Purpose of OFFSITE MONITORING <ul style="list-style-type: none"> 1) Initially CONFIRM offsite release 2) TRACK direction of the PLUME 	

NUMBER EPIP-4.12	PROCEDURE TITLE OFFSITE ENVIRONMENTAL MONITORING INSTRUCTIONS	REVISION 03
		PAGE 4 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5	(CONTINUED) 3) Determine radiological COMPOSITION of the plume	
6.	ESTABLISH RADIO CONTACT: a) Activate EPIP-4.19, Use of <u>Radios for Health Physics Monitoring</u> to establish radio communication with team using the RADIOPHONE	a) <u>IF</u> radio communications are <u>NOT</u> able to be established request assistance from the Radiological Assessment Director AND Dispatch Teams instructing them to use a public telephone to relay results to the TSC
	b) Instruct team to report all data to the <u>TSC</u> until instructed otherwise	
	c) Give monitoring teams the <u>TSC telephone number 2252</u> in case of radio failure	
7.	ESTABLISH MONITORING LOCATION: a) A number of PRESELECTED MONITORING LOCATIONS have been established around the station (see Attachment <u>1</u> and <u>2</u> and/or map in EMERGENCY KIT.) 1) These points can be used initially to locate monitoring teams	a) <u>IF</u> maximum plume concentration is <u>NOT</u> at preselected monitoring locations, <u>GO TO</u> Substep <u>b</u>
	b) Monitoring at LOCATIONS OTHER THAN PRESELECTED can be identified using Attachment <u>1</u> or the map in the EMERGENCY KIT.	

NUMBER EPIP-4.12	PROCEDURE TITLE OFFSITE ENVIRONMENTAL MONITORING INSTRUCTIONS	REVISION 03
		PAGE 5 of 7

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

7. (CONTINUED)

- 1) Location can be specified by use of SECTOR DESIGNATION and DISTANCE (MILES) (ie. a distance of 2 MILES NORTH of the plant would be A-2)
- c) Locate team(s) downwind
 - 1) Wind direction from Step 3 indicates direction wind is coming FROM

8. CONFIRMATION:

- a) Direct first Monitoring Team to the sector, nearsite, which is affected by plume
- b) Obtain the following data and/or samples, if appropriate
 - 1) Maximum dose rate (mR/HR)
 - 2) Air sample - particulate, iodine and gas
 - 3) Soil Sample
- c) HAVE initial confirmatory samples RETURNED to the Security Building

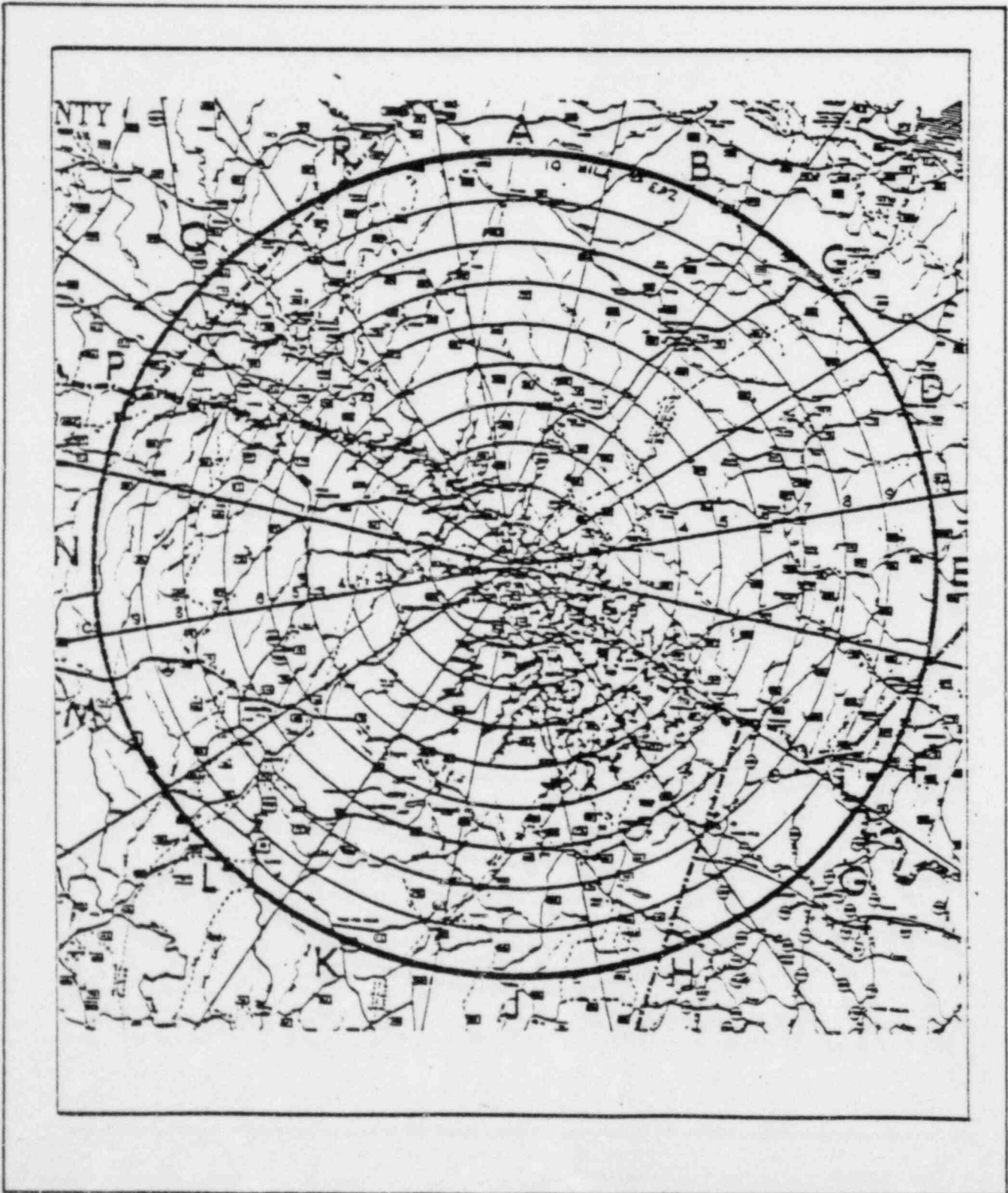
NUMBER EPIP-4.12	PROCEDURE TITLE OFFSITE ENVIRONMENTAL MONITORING INSTRUCTIONS	REVISION 03 PAGE 6 of 7
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8.	(CONTINUED)	
	1) Air sample should be immediately analyzed to determine Iodine/Noble Gas ratio	
9.	DETERMINE OFFSITE RELEASE.	
	a) <u>If monitoring data becomes available, activate EPIP-4.13 OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA</u>	<u>If data is not available continue with this instruction</u>
10.	PLUME TRACKING:	
	a) Plume monitoring should continue, obtaining at a minimum, the dose rate at centerline of the plume	
	b) Unexpected readings may result from plume rise, looping or cloud meander	
	1) Have team travel downwind a distance until plume is located	
	c) Review the applicability of Attachment <u>3</u> , concerning plume width	
11.	FIXED ENVIRONMENTAL SAMPLERS AND TLD'S:	
	a) Fixed air samplers and TLD's provide good information on the TOTAL release. Collection of these samples may provide best information after termination of release	

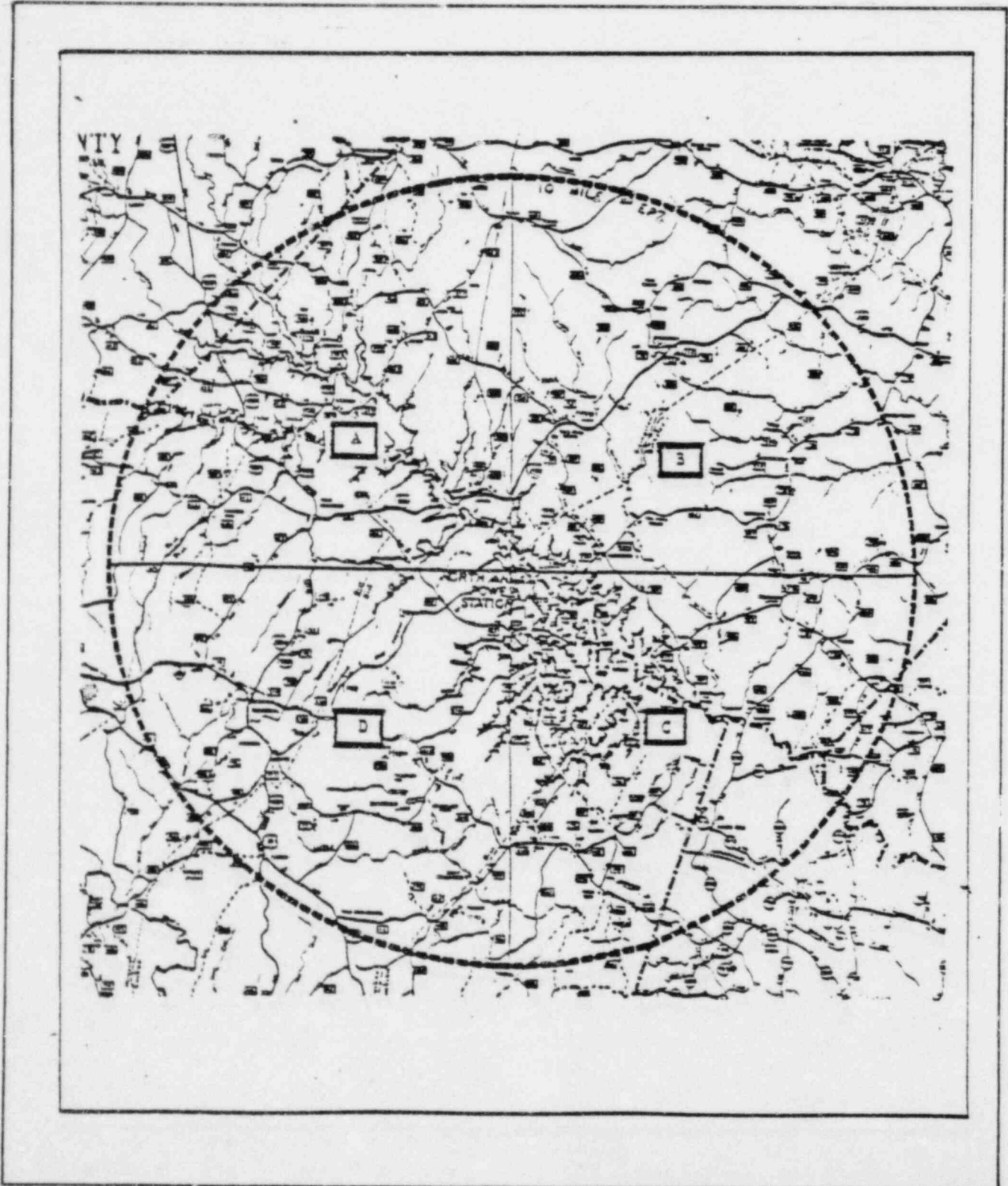
NUMBER EPIP-4.12	PROCEDURE TITLE OFFSITE ENVIRONMENTAL MONITORING INSTRUCTIONS	REVISION 03
		PAGE 7 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12.	ADDITIONAL SAMPLING:	
	a) Additional sampling for determination of chronic exposure pathways is not normally within the scope of INITIAL EMERGENCY RESPONSE	
	b) Upon <u>RECOVERY</u> phase of the Emergency, direct monitoring teams to obtain milk, water and crop samples as appropriate	
13.	CONTINUE MONITORING:	
	a) Continue Step <u>7</u> through <u>11</u> until:	
	1) EOF MANNED, <u>GO</u> TO Step <u>2</u>	
	OR	
	2) Release TERMINATED, <u>GO</u> TO Step <u>14</u>	
14.	PROCEDURE COMPLETION:	
	a) COMPLETED BY: _____	
	DATE: _____	
	TIME: _____	
END		

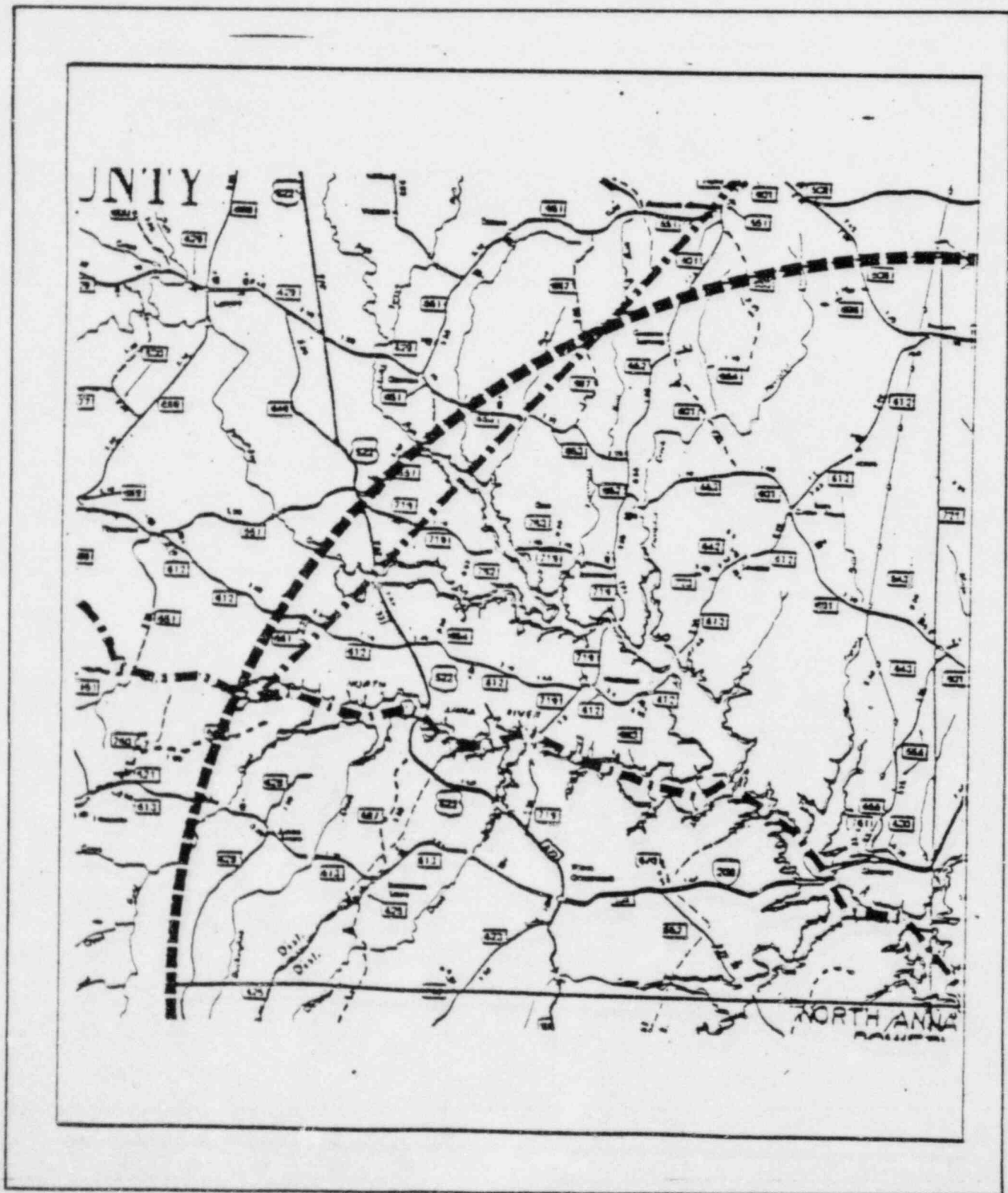
NUMBER EPIP-4.12	ATTACHMENT TITLE SECTOR MAP NORTH ANNA POWER STATION	REVISION 03
ATTACHMENT 1		PAGE 1 of 6



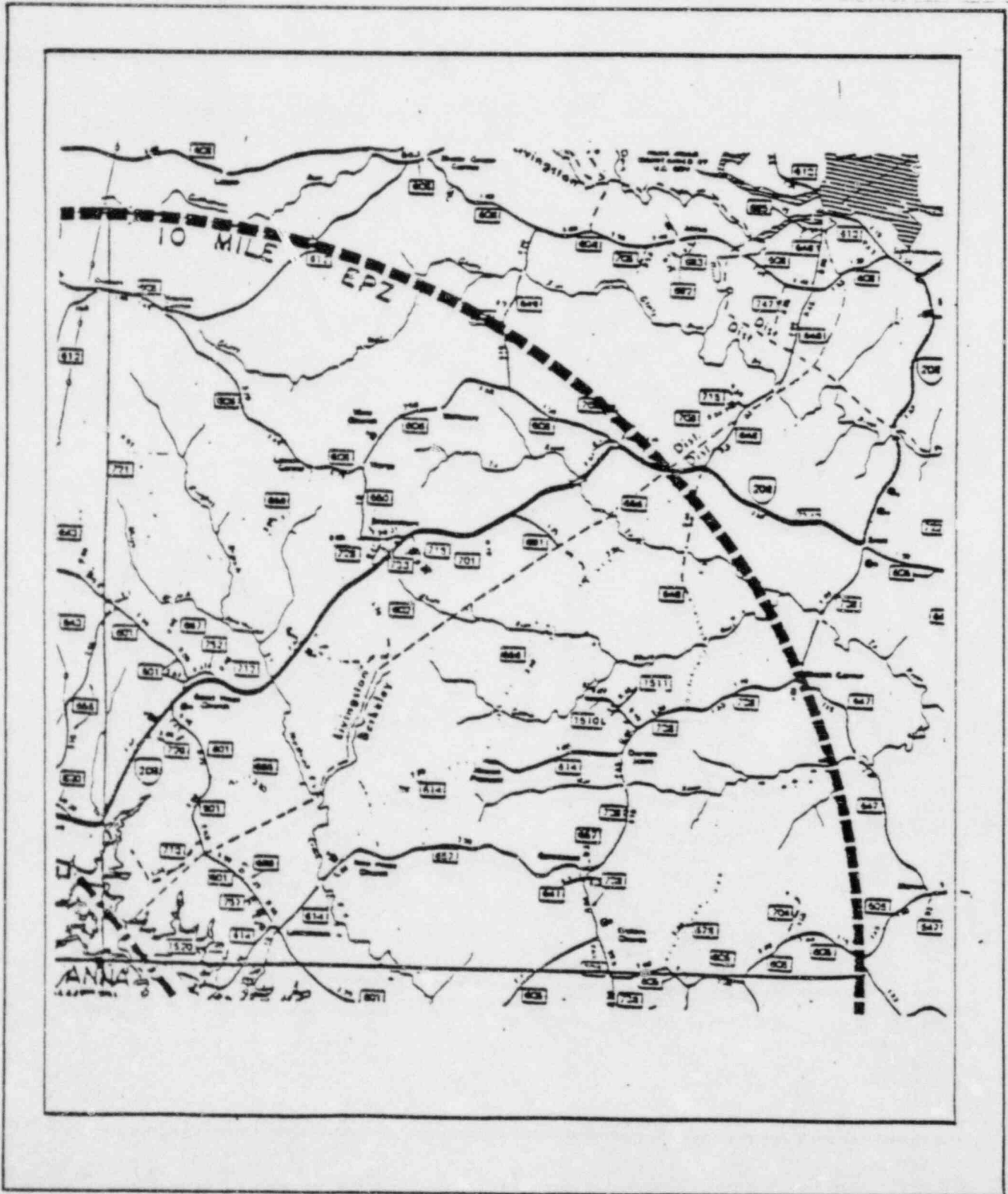
NUMBER EPIP-4.12	ATTACHMENT TITLE GRID MAP NORTH ANNA POWER STATION	REVISION 03
ATTACHMENT 1		PAGE 2 of 6



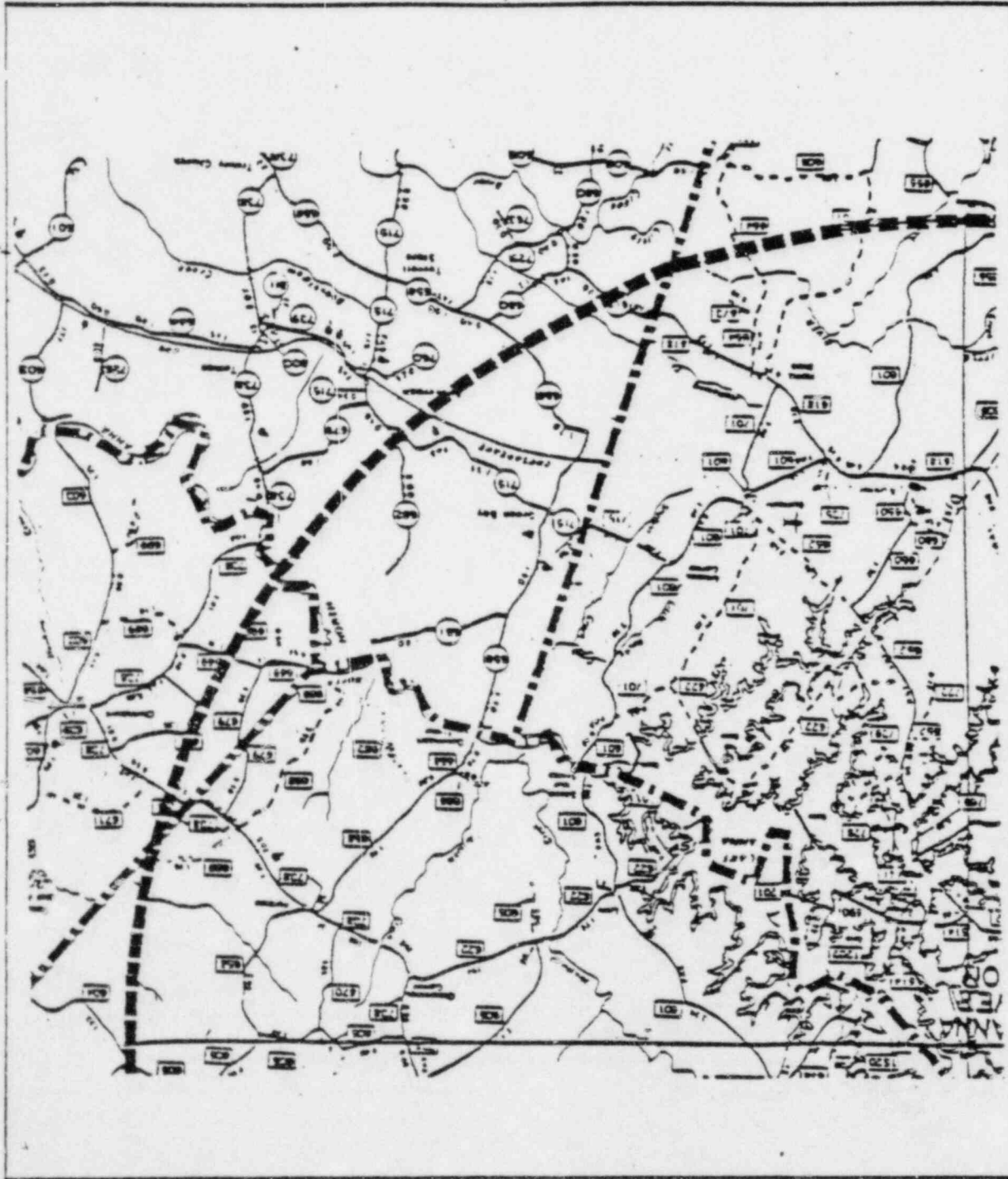
<p>NUMBER EPIP-4.12</p>	<p>ATTACHMENT TITLE GRID MAP A WITH 10-MILE EPZ LINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>		<p>PAGE 3 of 6</p>



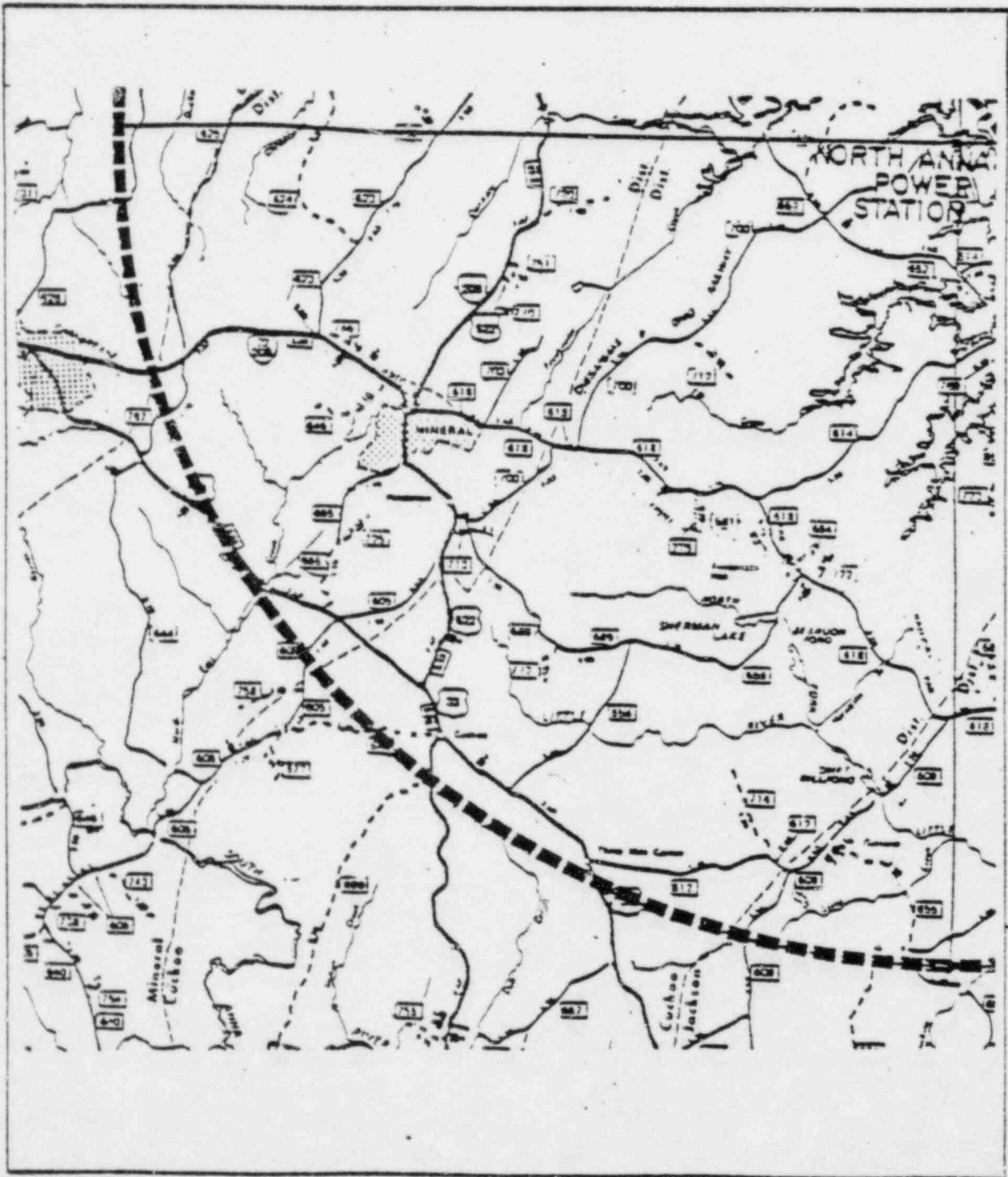
NUMBER EPIP-4.12	ATTACHMENT TITLE GRID MAP B WITH 10-MILE EPZ LINE	REVISION 03
ATTACHMENT 1		PAGE 4 of 6



<p>NUMBER EPIP-4.12</p>	<p>ATTACHMENT TITLE GRID MAP C WITH 10-MILE EPZ LINE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>		<p>PAGE 5 of 6</p>



NUMBER EPIP-4.12	ATTACHMENT TITLE GRID MAP D WITH 10-MILE EPZ LINE	REVISION 03
ATTACHMENT 1		PAGE 6 of 6



NUMBER EPIP-4.12	ATTACHMENT TITLE LOCATION OF PRESELECTED SAMPLE LOCATIONS	REVISION 03
ATTACHMENT 2		PAGE 1 of 2

Sector A

1. At the intersection of Route 601 and 643, Hailey Mill Road.
2. Approximately 1.0 mile North intersection of Routes 655 and 208 on Route 655.

Sector B

3. At the intersection of Routes 601 and Route 208 at Good Hope Church.
4. On Route 208 at Bethal Church.

Sector C

5. On Route 713 South, approximately 0.5 miles from the intersection of Route 713 and Route 601.

Sector D

6. On Route 601 East, approximately 0.75 miles from intersection of Routes 601 and Route 614.
7. At the intersection of Route 601 and Route 614 in Lewistown.

Sector E

8. On Routes 601 East, approximately 4.0 miles from Good Hope Church and 0.5 mile from Lewistown.
9. On Route 614 South, approximately 0.75 mile from intersection of Routes 601 and 614.

Sector F

10. At the intersection of Route 601 and 622 in Levy.
11. At the end of Route 1520 (lakefront), approximately 0.3 mi from the intersection of Route 614 and Route 601.

Sector G

12. At the end of 690. A private access road, a Lake Anna sign and the presence of garbage dumpsters mark the location.

Sector J

13. At the intersection of Route 652 and Route 614 in Sector J.

NUMBER EPIP-4.12	ATTACHMENT TITLE LOCATION OF PRESELECTED SAMPLE LOCATIONS	REVISION 03
ATTACHMENT 2		PAGE 2 of 2

Sector J

- 14. On Route 614 South, approximately 1.25 miles from intersection of Route 652 and Route 614.

Sector H

- 15. At the intersection of Routes 652 and Route 614 in Sector H.

Sector K

- 16. On Route 652, approximately 1.0 mile Southeast of the intersection of Route 652 and Route 700.

Sector L

- 17. Laurel Hill Church, approximately 0.25 mile Southeast of the intersection of Routes 700 and 652. Sector M

Sector M

- 18. At the intersection of Route 652 and C&O Railroad, approximately 0.125 mile Northwest intersection of Routes 652 and 700

Sector N

- 19. At the Trailer Park on Route 652, approximately 0.25 mile Northwest of the intersection of Route 700 and 652.
- 20. On Route 685, approximately 0.5 mile North of the intersection of Routes 652 and 685.

Sector P

- 21. Route 685, approximately 1.90 mile North of the intersection of Routes 652 and 685.
- 22. At Edgewood Church, approximately 1.75 miles Northwest of the intersection of Routes 652 and 700.

Sector Q

- 23. On Route 208 East, approximately 1.60 mile from the intersection of Routes 652 and 208.

Sector R

- 24. At the intersection of Route 655 and Route 208 in Glenora.

NUMBER EPIP-4.12	ATTACHMENT TITLE FACTORS CONTROLLING THE AREA AFFECTED BY A RELEASE	REVISION 03
ATTACHMENT 3		PAGE 1 of 2

The area a release cloud may affect is dependent on the atmospheric stability class and the wind speed and direction, among other variables such as precipitation and the terrain. From a practical standpoint only stability class, which affects the "width" of the affected area, and wind speed and direction which affects the length and direction of the area, will be considered.

The width of an affected area as a function of stability class and distance from the release point is illustrated by the following table. The table lists the different stability classes and lists the width of an area in feet which will contain a certain percent of the maximum calculated concentrations (or doses). The percentages considered are 90, 50 and 10%. The distances are 1 and 2 miles from a release point. These tables may be used as guidelines on what to tell the monitoring team to expect, such as in stability class F they are looking for a small area of rapidly increasing concentrations if the cloud is approached from the side.

Stability Class	Percent of Maximum	Area Width - Feet	
		1 Mile Distance	2 Mile Distance
A	90	878	1632
	50	2256	4195
	10	4109	7641
B	90	653	1227
	50	1676	3152
	10	3053	5741
C	90	472	887
	50	1213	2279
	10	2209	4152
D	90	319	595
	50	819	1530
	10	1492	2787
E	90	235	433
	50	603	1112
	10	1098	2027
F	90	161	299
	50	414	768
	10	754	1399

<i>NUMBER</i> EPIP-4.12	<i>ATTACHMENT TITLE</i> FACTORS CONTROLLING THE AREA AFFECTED BY A RELEASE	<i>REVISION</i> 03
<i>ATTACHMENT</i> 3		<i>PAGE</i> 2 of 2

<u>Stability Class</u>	<u>Percent of Maximum</u>	<u>Area Width - Feet</u>	
		<u>1 Mile Distance</u>	<u>2 Mile Distance</u>
G	90	97	179
	50	249	460
	10	453	843

Wind speed affects the area by the fact that higher wind speeds cause the cloud to arrive sooner, but the concentrations are reduced. The affected area will be downwind of the release point, if the direction is variable, the area with the highest average downwind direction will be affected the greatest.

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<i>NUMBER</i>	<i>PROCEDURE TITLE</i>	<i>REVISION</i>
EPIP-4.13	OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA (With 4 Attachments)	03
		<i>PAGE</i>
		1 of 7

PURPOSE

Confirm onsite dose projections or determine source term, using Environmental Monitoring data.

USER

Radiological Assessment Director or Members of Dose Assessment Team.

ENTRY CONDITIONS

Any of the following:

- 1) Activation by EPIP-4.03, Dose Assessment Controlling Procedure.
- 2) Activation by EPIP-4.12, Offsite Environmental Monitoring Instructions.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S):	Entire Procedure	DATE:	07-02-82
REV. 01	PAGE(S)	Entire Procedure	DATE:	07-22-82
REV. 02	PAGE(S)	Entire Procedure	DATE:	09-01-82
REV. 03	PAGE(S)	Entire Procedure	DATE:	05-24-83
REV.	PAGE(S)		DATE:	
REV.	PAGE(S)		DATE:	
REV.	PAGE(S)		DATE:	

<i>APPROVAL RECOMMENDED</i>	<i>APPROVED</i>	<i>DATE</i>
	 CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	05-24-83

<p>NUMBER EPIP-4.13</p>	<p>PROCEDURE TITLE OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA</p>	<p>REVISION 03</p>
		<p>PAGE 2 of 7</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE:	
	a) Initiated By: _____ Date: _____ Time: _____	
2.	USE OF ENVIRONMENTAL DATA:	
	a) Offsite Environmental Data may be used for: 1) Confirm dose projection OR 2) If onsite release data from monitors and/or sample analysis is <u>NOT</u> available a Source Term (Ci/SEC) may be determined	2) If onsite release data from monitors and/or sample analysis <u>IS</u> available <u>DO NOT</u> estimate Source Term from environmental data
3.	CONFIRM DOSE PROJECTIONS:	
	a) Use offsite dose rate measurement to CONFIRM projected dose rate OR Establish Real Time Dose Rate Offsite	a) If Source Term (Ci/SEC) calculations are needed using Environmental Data, <u>GO TO Step 8</u>
	b) Insure measurements <u>OR</u> samples taken are from centerline of the plume	b) If measurements are <u>NOT</u> taken from centerline of the plume, <u>GO TO Step 6</u>
	c) DOSE RATES may be obtained from: 1) Direct Measurements 2) Sample Analysis Data	

NUMBER EPIP-4.13	PROCEDURE TITLE OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA	REVISION 03
		PAGE 3 of 7

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: Sample analysis data of environmental sample should be used, when available, versus field analysis in determining OFFSITE DOSE RATE.

4. DETERMINE WHOLE BODY OFFSITE DOSE RATE FROM DIRECT RADIATION READINGS:

- a) Obtain from the monitoring teams the centerline DOSE RATE
- 1) Log DATE, TIME, LOCATION, and DOSE RATE on Attachment 1
- b) The DOSE RATE from substep a may be considered the Whole Body Dose Rate
- c) Log DOSE RATE on Attachment 1

a) If DOSE RATES are NOT from the centerline, GO TO Step 6

5. DETERMINE THYROID OFFSITE DOSE RATE FROM SAMPLE ANALYSIS:

- a) Determine Offsite Dose Rate to the THYROID by using data from air sample taken at centerline of the plume

a) If data from air sample is NOT yet available, continue with Step 6 until data is available

OR

If sample is NOT taken at centerline of the plume, GO TO Step 6

- b) If sample data is given in COUNTS PER MINUTE obtain the BACKGROUND COUNTS PER MINUTE from the monitoring team(s)

b) If sample data is given in uCi/ml, GO TO Substep c

NUMBER EPIP-4.13	PROCEDURE TITLE OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA	REVISION 03
		PAGE 4 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>1) Determine the NET COUNTS PER MINUTE:</p> $\text{SAMPLE (CPM)} - \text{BACKGROUND (CPM)} = \text{NET (CPM)}$	
	<p>2) Refer to Attachment <u>2</u> to determine Equivalent I-131 activity in uCi/ml</p>	<p>2) If Net CPM is too large to locate on the Attachment, divide the CPM by a power of <u>10</u> to get on the graph, then multiply the activity (uCi/ml) by the same power of <u>10</u></p>
	<p>c) Determine Thyroid Dose Rate:</p> $\text{ACTIVITY (uCi/ml)} \times 1.85 \text{ E}+9 = \text{mR/HR}$	
	<p>d) Log the DATE, TIME, LOCATION, and DOSE RATE on Attachment <u>1</u></p>	
6.	OFF-CENTERLINE DOSE RATES:	
	<p>a) If Dose Rates from Step <u>5</u> and Step <u>6</u> were taken off-centerline, activate EPIP-4.10. Determination of X/Q and return to this step after determining</p> <p>1) X/Q at the perpendicular distance from sample location, on the centerline of plume</p> <p>2) X/Q of the sample location</p>	<p>a) If dose rates from Step 5 and Step 6 are taken from the centerline, <u>GO TO</u> Step <u>7</u>.</p>
	<p>b) Determine Estimated Centerline Dose Rate:</p> $\frac{\text{X/Q (Centerline)} \times \text{Dose Rate (mR/HR)}}{\text{X/Q (Sample Location)}} = \text{DOSE RATE mR/HR}$	
	<p>c) Log the DATE, TIME, LOCATION and DOSE RATE on Attachment <u>1</u></p> <p>1) Note in the Remarks Column that the sample was taken off centerline</p>	

NUMBER EPIP-4.13	PROCEDURE TITLE OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA	REVISION 03
		PAGE 5 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7.	TRANSMIT DATA: a) Upon completion of Attachment <u>1</u> , relay the Attachment to the Dose Assessment Team Leader.	
8.	DETERMINE SOURCE TERM: (Ci/SEC) a) Use Offsite Data to determine the Source Term (Ci/SEC) of the release b) Insure measurements or samples taken are from the centerline of the plume c) Source Term may be estimated by: 1) Direct Measurements 2) Sample Analysis Data	a) If Source Term data is <u>NOT</u> required, <u>GO TO</u> Step <u>12</u> b) If data is <u>NOT</u> from the centerline of the plume, <u>GO TO</u> Step <u>6</u> to estimate centerline data and return to this step
9.	DETERMINE SOURCE TERM FROM DIRECT MEASUREMENTS: a) Obtain centerline Dose Rate measurements 1) Log the LOCATION, TIME and DOSE RATE on Attachment <u>3</u> 2) Obtain the current Wind Speed and Stability Class	a) If Dose Rate measurements are <u>NOT</u> from centerline of the plume, <u>GO TO</u> Step <u>6</u> to estimate centerline data and return to this step

NUMBER EPIP-4.13	PROCEDURE TITLE OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA	REVISION 03
		PAGE 6 of 7

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

- b) Determine the CONVERSION FACTOR from Attachment 4, using the centerline DISTANCE from the plant
- c) Determine the RELEASE RATE of EQUIVALENT Xe-133 (Ci/SEC):
- $mR/HR \times 2.38 \text{ E-5} \times \text{WIND SPEED} \times \text{CONVERSION FACTOR} = \text{ ______ } \text{ Ci/SEC}$
- d) Log results on Attachments 3

10. DETERMINE SOURCE TERM FROM SAMPLE ANALYSIS:

NOTE: This step may be used for Iodine samples taken in the field or Iodine and Gas samples returned to the station for analysis.

- | | |
|--|--|
| <p>a) Insure sample data is from centerline of the plume</p> <p>b) Obtain uCi/ml measurements at sample location</p> <p>1) Log LOCATION, TIME and ACTIVITY on Attachment <u>3</u></p> <p>2) Obtain the current Wind Speed and Stability Class</p> <p>c) Obtain the CONVERSION FACTOR from Attachment <u>4</u> using the centerline DISTANCE from the plant</p> | <p>a) If sample data is not from centerline of plume, <u>GO TO</u> Step <u>6</u> to estimate centerline data (use uCi/ml instead of dose rate) and return to this step</p> <p>b) If sample data received in COUNTS PER MINUTE, <u>GO TO</u> Step <u>5</u>, Substep <u>b</u>, to determine activity uCi/ml) and return to this step</p> |
|--|--|

NUMBER EPIP-4.13	PROCEDURE TITLE OFFSITE RELEASE ASSESSMENT WITH ENVIRONMENTAL DATA	REVISION 03
		PAGE 7 of 7

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

d) DETERMINE THE SOURCE TERM

$$\text{ACTIVITY} \times \text{WIND SPEED} \times \text{CONVERSION FACTOR} = \text{Ci/SEC}$$

NOTE: Ci/SEC determined in Step 9 and Step 10 represent a release at some time PRIOR to the field measurement. To determine actual release time:

$$\text{TIME OF RELEASE} = \text{TIME OF MEASUREMENT} - \frac{\text{DISTANCE FROM PLANT}}{\text{WIND SPEED}}$$

11. TRANSMIT DATA:

a) Upon completion of Attachment 3, inform Dose Assessment Team Leader of results

12. CONTINUED ASSESSMENT:

a) Relocate monitoring teams on the advice of the Dose Assessment Team Leader

a) If teams are to remain in the same location, GO TO Substep b

b) Return to Step 3 and repeat assessment if the emergency has NOT terminated or if the EOF is NOT manned

b) If the emergency has terminated or if the EOF has been manned, GO TO Step 13

13. ADMINISTRATION:

a) Return all procedures and Offsite data to the Radiological Assessment Director

14. PROCEDURE COMPLETION:

a) Completed By: _____
 Date: _____
 Time: _____

END

<i>NUMBER</i> EPIP-4.13	<i>ATTACHMENT TITLE</i> OFFSITE ENVIRONMENTAL DATA SHEET	<i>REVISION</i> 03
<i>ATTACHMENT</i> 1		<i>PAGE</i> 1 of 1

DATE

TIME

LOCATION

WHOLE BODY
DOSE RATE _____
(mR/hr)

THYROID
DOSE RATE _____
mR/hr

Thyroid Dose Rate (mR/hr) = Activity (uCi/ml) x 1.85 E + 9

REMARKS:

<p>NUMBER EPIP-4.13</p>	<p>ATTACHMENT TITLE I-131 ACTIVITY DETERMINATION</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 1 of 1</p>



NUMBER EPIP-4.13	ATTACHMENT TITLE FACTORS FOR OTHER THAN PRESELECTED MONITORING LOCATIONS BASED ON STABILITY CLASS	REVISION 03
ATTACHMENT 4		PAGE 1 of 1

Use the following Equation to obtain the conversion factor for other than preselected monitoring locations:

$$\text{Factor} = \frac{1}{A(x)^B}$$

Where: (a) A and B are a function of stability class:

Where: (b) (x) is centerline distance in miles:

<u>Stability Class</u>	<u>A</u>	<u>B</u>
A	1.2 E-6	-0.895
B	1.1 E-5	-1.74
C	4.5 E-5	-1.69
D	1.4 E-4	-1.51
E	2.8 E-4	-1.37
F	5.9 E-4	-1.32
G	1.2 E-3	-1.18

NOTE: If sample distances are less than one mile, use the calculated values for two mile distance for source term calculations. The equation, $\text{Factor} = \left(\frac{1}{A(x)^B}\right)$ is invalid at less than one mile.

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<i>NUMBER</i>	<i>PROCEDURE TITLE</i>	<i>REVISION</i>
EPIP-4.15	ONSITE MONITORING (With 3 Attachments)	03
		<i>PAGE</i> 1 of 9

PURPOSE

Confirm initial offsite releases and provide surveys to provide personnel protection program onsite.

USER

Onsite (out of plant) Monitoring Team

ENTRY CONDITIONS

Any one of the following conditions:

1. Alert, Site or General Emergency.
2. Activation by another EPIP.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<i>APPROVAL RECOMMENDED</i> 	<i>APPROVED</i>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<i>DATE</i> 05-24-83
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<p>NUMBER EPIP-4.15</p>	<p>PROCEDURE TITLE ONSITE MONITORING</p>	<p>REVISION 03</p>
		<p>PAGE 2 of 9</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>1.</p>	<p>INITIATE PROCEDURE: BY: _____ DATE: _____ TIME: _____</p>	
<p>2.</p>	<p>REQUEST BRIEFING:</p> <p>a) Request briefing with the Radiation Protection Supervisor as to the following:</p> <p>1) Required <u>MONITORING LOCATIONS</u> (see Attachment 1 for onsite maps) or current wind direction and <u>SAMPLES</u> or <u>SURVEYS</u> required</p> <p>2) Anticipated <u>RADIATION LEVELS</u></p> <p>3) <u>PROTECTIVE CLOTHING DOSIMETRY</u> and/or <u>RESPIRATORY PROTECTIVE</u> gear required</p> <p>b) Team should consist of two individuals, only one need be a H.P. Technician</p>	<p>a) <u>IF</u> Radiological Protection Supervisor <u>NOT</u> present, request briefing with the Radiological Assessment Director or Emergency Manager.</p>
<p>3.</p>	<p>DETERMINE NEED FOR TRANSPORTATION:</p> <p>a) <u>IF</u> sample locations are at a distance <u>OR IF</u> air samples are required, request use of Vepco vehicle</p>	<p>a) <u>IF</u> vehicles are <u>NOT</u> available, request assistance from the Radiological Assessment Director.</p>

NUMBER EPIP-4.15	PROCEDURE TITLE ON-SITE MONITORING	REVISION 03
		PAGE 3 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

4. OBTAIN MONITORING/SAMPLING EQUIPMENT:

NOTE: Emergency kits stored at the Medical Facility should be used for OFFSITE MONITORING. Obtain equipment for surveys from normal station supplies.

a) Obtain the following equipment, as necessary, from the Health Physics instrument locker

- 1) Portable survey meter (minimum range of 0-1000 mR/hr)
- 2) Battery powered air sampler IF air sampling is required
- 3) RM-14 with H.P. 210 probe IF analysis of samples are required in field
- 4) Poly bags for soil sample, plastic bottles for liquid samples, gas chambers IF gas sample is required and smears IF swipes are to be taken

- 2) Continue with this instruction
- 3) Continue with this instruction
- 4) Continue with this instruction

b) Perform operability check as appropriate:

- 1) Battery check
- 2) Current calibration sticker
- 3) Source check (if available)

NUMBER EPIP-4.15	PROCEDURE TITLE ONSITE MONITORING	REVISION 03
		PAGE 4 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5.	INITIAL CONFIRMATION OF OFFSITE RELEASES:	
a)	IF team is activated for INITIAL CONFIRMATION and assessment of radioactive release, proceed immediately to the location specified in Step 2, using suggested protective clothing and respiratory gear	a) If team is (dispatched) for follow-up monitoring, <u>GO TO Step 6.</u>
b)	Use portable survey meter beta window open, transverse the plume in the cross wind direction and determine the maximum dose rate (mr/hr)	
1)	Close window and record <u>mR/hr</u> , <u>TIME</u> of reading and <u>LOCATION</u> on survey maps in the attachment	
c)	Place a <u>PARTICULATE FILTER</u> and a <u>SILVER ZEOLITE</u> cartridge in the air sampler	
1)	Connect cables of the samples to a charged battery	1) If sampler has a supply of batteries, continue with this instruction.
	<u>NOTE:</u> FLOW RATE of samples is located on the side of the sampler.	
2)	Turn sampler on and obtain a 10ft ³ sample at the location of highest <u>mR/hr</u> (Substep b)	2) If sample is to be returned to the count room for analysis, volume of the sample may vary.

NUMBER EPIP-4.15	PROCEDURE TITLE ONSITE MONITORING	REVISION 03
		PAGE 5 of 9

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5.	(CONTINUED)	
	<u>NOTE:</u> Consider Team relocate out of the plume while sample is being taken	
	3) After sample has been collected, turn sampler off and disconnect the cables	
	4) Obtain a GAS SAMPLE by opening the top of the gas chamber and waving the chamber within the area of the plume	4) If plastic gas chamber used: a) Open petcocks b) Attach aspirator bulb c) Aspirate about 10 times d) Shut petcocks remove aspirator bulb
	d) Obtain a SOIL sample	
	1) Take approximately <u>1/4</u> to <u>1/2</u> inch of soil from <u>1</u> square foot area	
	2) Place sample in a poly bag	
	e) Return samples/complete survey	
	1) <u>IF</u> samples are LESS THAN <u>10</u> mR/hr, return sample to the count room in a <u>CLEAN</u> plastic bag	1) <u>IF</u> samples are GREATER THAN <u>10</u> mR/hr, dilute the gas sample as per EPIP-4.26, <u>High Level Activity Sample Analysis.</u>
		<u>OR</u> Obtain another sample using a smaller sample volume.
	f) <u>GO TO</u> Step <u>8</u>	
6.	MONITORING FOR PERSONNEL PROTECTION:	

<p>NUMBER EPIP-4.15</p>	<p>PROCEDURE TITLE ONSITE MONITORING</p>	<p>REVISION 03</p>
		<p>PAGE 6 of 9</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>a) Obtain a portable radio prior to departure</p>	<p>a) <u>IF</u> portable radio is not available, request assistance through the Radiological Assessment Director.</p>
		<p><u>OR</u></p>
		<p>Proceed with survey, returning to the office to transmit all survey information.</p>
	<p>b) Establish communications with the Radiological Protection Supervisor</p>	<p>b) If communications cannot be established, <u>GO TO</u> Substep <u>c</u>.</p>
	<p>1) Instructions for use of radios can be found in EPIP-4.19, <u>Use of Radio-Phones, Portable and Mobile Radios</u></p>	
	<p>c) Proceed to the location specified in Step <u>2</u> using the suggested protective clothing and respiratory gear</p>	
	<p>1) Use portable survey meter, beta window closed, transverse plume, and obtain the maximum dose rate (mR/HR)</p>	
	<p>2) Record mR/HR, TIME AND LOCATION on the survey map. Attachment 1.</p>	
	<p>d) If air sampling is requested, place a PARTICULATE FILTER and a SILVER ZEOLITE cartridge in the a.r. sampler</p>	<p>d) If air sampling is <u>NOT</u> requested <u>GO TO</u> Substep <u>f</u>.</p>
	<p>1) Connect cables to vehicle battery</p>	<p>1) If sampler has batteries continue with this instruction</p>
<p>NOTE: Flow rate of sampler is located on the side of the sampler.</p>		

<p>NUMBER</p> <p>EPIP-4.15</p>	<p>PROCEDURE TITLE</p> <p>ONSITE MONITORING</p>	<p>REVISION</p> <p>03</p>
		<p>PAGE</p> <p>7 of 9</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6.	<p>(CONTINUED)</p> <p>2) Turn on air sampler and obtain a 10ft³ sample.</p> <p>e) <u>IF</u> analysis of air sample is required in the field <u>GO TO</u> Step <u>7</u></p> <p>f) Obtain soil sample <u>IF</u> requested as per Step <u>5</u>, Substep <u>d</u></p>	<p>e) Continue with this procedure.</p>
<p><u>NOTE:</u> <u>IF</u> direction of plume is toward site guard towers monitor habitability of the area surrounding the tower and report results.</p>		
	<p>g) Remain in the field, contacting the Radiation Protection Supervisor as to changes in direction of the plume and other specified monitoring locations</p> <p>1) Follow good ALARA practices while monitoring the plume</p>	<p>g) <u>IF</u> radio was not used <u>OR</u> <u>IF</u> radio malfunctions return results of surveys to the Radiation Protection Supervisor.</p>
7.	<p>FIELD ANALYSIS OF AIR SAMPLES:</p>	
	<p>a) <u>IF</u> field analysis of an air sample is required, proceed to an area of low background</p> <p>b) Turn on EBERLINE RM-14 (FRISKER) and obtain a background count rate and log on Attachment <u>2</u></p> <p>c) Hold <u>SILVER ZEOLITE</u> cartridge one-quarter inch from the detector with influent side of cartridge facing the detector</p>	<p>a) If sample analysis is <u>NOT</u> required in the field, <u>GO TO</u> Step <u>8</u></p>

NUMBER EPIP-4.15	PROCEDURE TITLE ONSITE MONITORING	REVISION 03
		PAGE 8 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

- d) Observe gross count rate and log on Attachment 2
- e) Subtract background count rate from gross count rate to obtain NET COUNT RATE

NOTE: IF net count rate is too large to locate on the graph, divide count rate by power of 10 then multiply activity by the same power of 10 to obtain corrected activity.

- f) Obtain equivalent I-131 activity ($\mu\text{Ci/ml}$) with data from Substep e and Attachment 3
- l) Log DATE, TIME, LOCATION and SAMPLE ACTIVITY on Attachment 2
- g) Return samples, at a later date, to the count room

8. REPEAT SURVEYS:

- a) Return to Step 6 and perform repetition of sampling and/or surveys as required by the Radiation Protection Supervisor
- a) If emergency terminates or if team is requested to return, GO TO Step 9

9. COMPLETE SURVEY DATA:

- a) Complete survey sheets by recording date, time, name, instrument used and its serial number

10. ADMINISTRATION:

- a) Return all completed survey forms and procedures to the Radiation Protection Supervisor

<i>NUMBER</i> EPIP-4.15	<i>PROCEDURE TITLE</i> ONSITE MONITORING	<i>REVISION</i> 03
		<i>PAGE</i> 9 of 9

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NGT OBTAINED

11.

PROCEDURE COMPLETED:

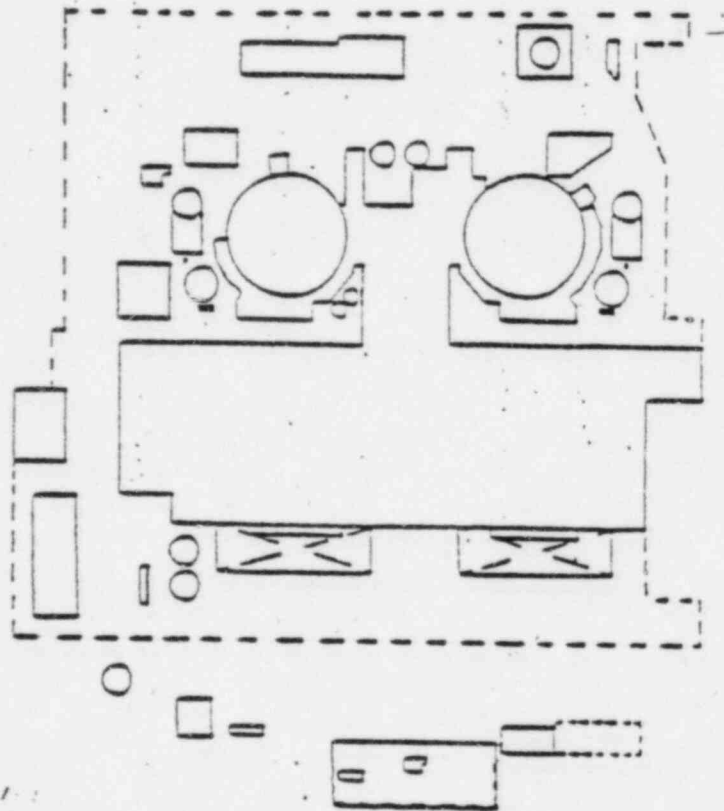
a) COMPLETED BY: _____

DATE: _____

TIME: _____

END

<p>NUMBER EPIP-4.15</p>	<p>ATTACHMENT TITLE</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>	<p>ONSITE PROTECTED AREA MAP</p>	<p>PAGE 1 of 1</p>



OUTSIDE AREA

TYPE OF SURVEY

- GENERAL AREA
- SWEEP HISTORY
- AIR SAMPLE

REACTOR POWER (1) _____ (2) _____

DETECTOR

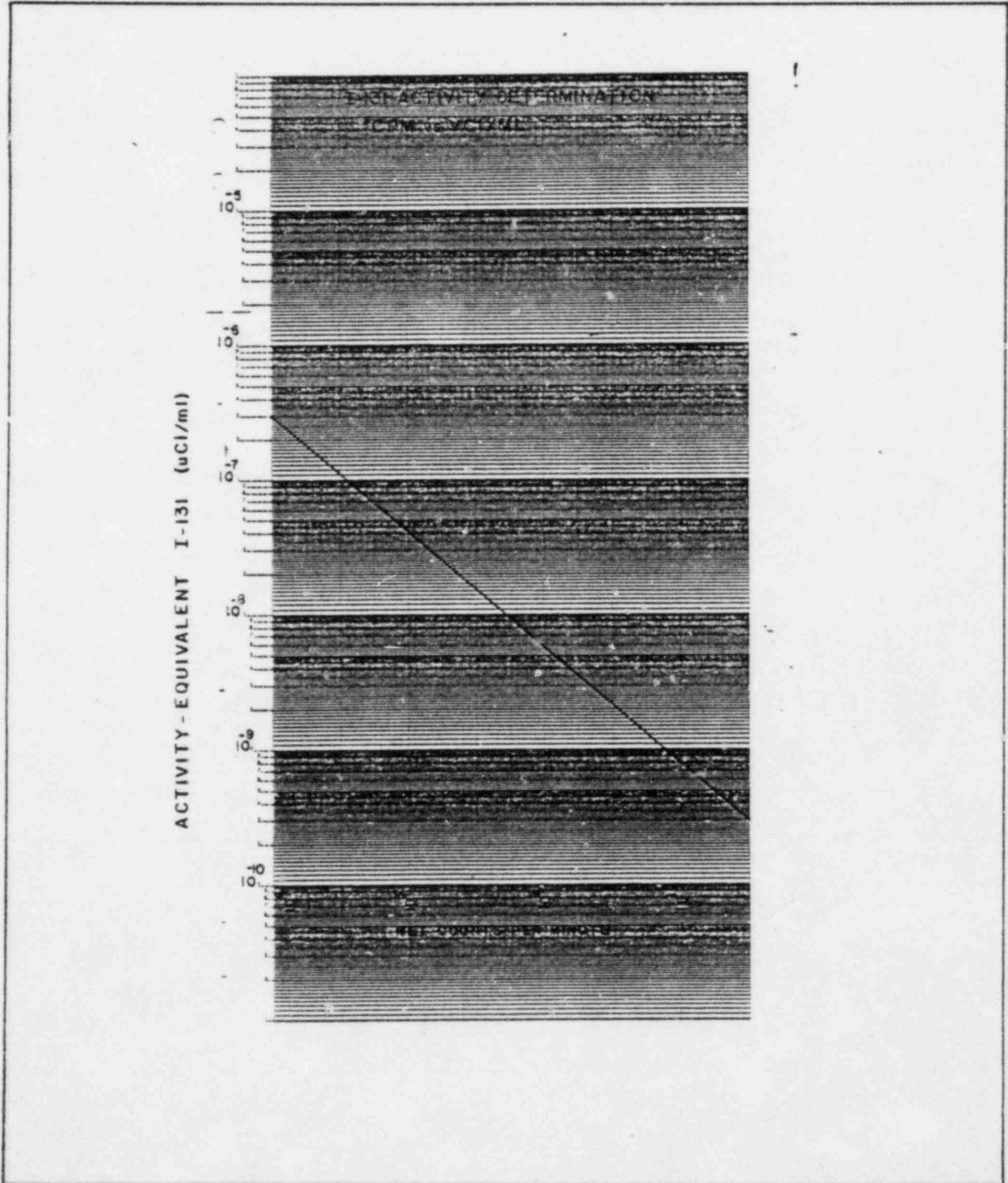
REPORT	TOTAL

DATE: _____

TIME: _____

BY: _____

<p>NUMBER EPIP-4.15</p>	<p>ATTACHMENT TITLE I-131 ACTIVITY DETERMINATION</p>	<p>REVISION 03</p>
<p>ATTACHMENT 3</p>		<p>PAGE 1 of 1</p>



VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER</p> <p>EPIP-4.16</p>	<p>PROCEDURE TITLE</p> <p>OFFSITE MONITORING (With 4 Attachments)</p>	<p>REVISION</p> <p>03</p> <hr/> <p>PAGE</p> <p>1 of 10</p>
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PURPOSE

Provide guidance for offsite monitoring teams in obtaining equipment, tracking plume, taking samples and transmitting data.

USER

Offsite Monitoring Teams.

ENTRY CONDITIONS

Activation by another EPIP.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

B. J. Faxon

APPROVED

[Signature]
 CHAIRMAN STATION NUCLEAR SAFETY
 AND OPERATING COMMITTEE

DATE

05-24-83

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03 <hr/> PAGE 2 of 10
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE: a) BY: _____ DATE: _____ TIME: _____	
2.	TEAM ASSIGNMENT: a) Offsite monitoring team shall consist of two individuals, only <u>ONE</u> need be a <u>H.P. TECHNICIAN</u> 1) Other individual will assist in obtaining equipment, driving the vehicle, etc.	
3.	REQUEST BRIEFING: a) Request briefing with the Radiation Protection Supervisor as to the following: 1) Required <u>MONITORING LOCATION</u> and <u>SAMPLES OR SURVEYS</u> required 2) Anticipated <u>RADIATION levels</u> 3) <u>PROTECTIVE CLOTHING, DOSIMETRY</u> and/or <u>RESPIRATORY GEAR</u> required b) Obtain information on who to report survey data 1) TSC 2) EOF	1) <u>IF</u> no location <u>OR</u> survey requirements given, proceed to security building and await instruction.

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03
		PAGE 3 of 10

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	OBTAIN VEHICLE: a) Health Physics truck will be used as primary transportation for Offsite Teams 1) Station Managers car will be the secondary vehicle used for transportation b) Insure vehicle has at least 1/4 tank of gas	a) Request assistance from Radiation Protection Supervisor or Radiological Assessment Director in obtaining vehicles.
5.	OBTAIN MONITORING KIT: a) Obtain a MONITORING KIT from <u>MEDICAL FACILITY</u> b) Obtain ADDITIONAL EQUIPMENT from storage at Medical Facility: 1) Battery powered AIR SAMPLER 2) RM-14 with H.P. <u>210</u> probe 3) Package of <u>SILVER ZEOLITE</u> cartridges and <u>PARTICULATE FILTERS</u>	
6.	PERFORM INSTRUMENT CHECK: a) Perform OPERABILITY check 1) Battery check 2) Current calibration sticker	a) Additional instruments are available at the Health Physics instrument locker.

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03
		PAGE 4 of 10

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

7. PROCEED TO MONITORING LOCATION:
- | | |
|---|--|
| <p>a) Obtain and don PROTECTIVE CLOTHING, DOSIMETRY and RESPIRATORY GEAR as specified in Step <u>3</u></p> <p>b) Use MAPS in Attachment <u>1</u> and/or Emergency Kit to determine initial location and other locations specified by emergency response personnel in TSC (or EOF)</p> <p>1) Preselected monitoring locations are listed on the maps in Attachment <u>1</u> and on Attachment <u>2</u></p> <p>c) Proceed to MONITORING LOCATION specified in Step <u>3</u></p> | <p>a) <u>IF</u> no gear is specified, continue with this instruction.</p> <p>c) <u>IF</u> no monitoring location specified, report to the security building.</p> |
|---|--|
8. ESTABLISH RADIO CONTACT:
- a) INITIAL radio communication will be with emergency response personnel in the TSC
- b) Once EOF is activated, a formal change of command will occur, and an announcement will be made declaring change of control of OFFSITE MONITORING to the EOF
- c) Establish radio communication with the TSC or EOF by instructions in EPIP-4.19, Use of Radios for Health Physics Monitoring

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03
		PAGE 5 of 10

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>1) TO TRANSMIT:</p> <p>"Mobile (<u>Number of Vehicle</u>) to EOF (or TSC) base. Our location is _____"</p> <p>2) Request <u>TELEPHONE NUMBER</u> that can be used to contact the Emergency Center in case of <u>RADIO FAILURE</u></p>	
9.	<p>PLUME TRACKING:</p> <p>a) When directed to locate PLUME, proceed to the location specified by TSC (or EOF)</p> <p>b) Obtain a portable <u>SURVEY INSTRUMENT</u> from monitoring kit and open beta window, if appropriate</p> <p>c) <u>TRAVERSE</u> the <u>PLUME</u> in a <u>CROSSWIND DIRECTION</u> (maintain parallel position with plant) holding survey probe out the window and <u>OBSERVE READINGS</u></p> <p>1) Reading should increase as you approach center of the plume, then decrease once past center line</p> <p>2) Traverse plume SEVERAL times until <u>MAXIMUM</u> point (center-line of plume) is located</p> <p>3) <u>CLOSE BETA WINDOW</u> and observe reading</p>	<p>c) <u>IF</u> no readings are observed, notify TSC (or EOF).</p>

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03
		PAGE 6 of 10

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	4) Log <u>mR/hr</u> and LOCATION, DATE and TIME on Attachment <u>3</u> 5) Log instrument and serial number on Attachment <u>3</u> 6) Inform TSC (or EOF) of MONITOR READING and LOCATION	1) <u>IF</u> further monitoring required, stay within the plume until complete.
	1) Relocate to an area outside the plume 2) Await further instructions	
10.	NOBLE GAS SAMPLING:	
	a) <u>IF</u> NOBLE GAS sample is requested, go to the center line of plume <u>OR</u> to location specified by TSC (or EOF)	a) <u>IF</u> NOBLE GAS sample is <u>NOT</u> requested, <u>GO TO</u> Step <u>11</u>
	b) Obtain a <u>100 cc GAS BOMB</u> from Emergency Kit	b) Request gas chambers be prepared and brought to the survey team.
	1) Remove top and <u>WAVE CHAMBER</u> in the air 2) Ensure petcocks are closed and <u>REPLACE TOP</u> securely	1) If plastic gas chamber: a) Open petcocks. b) Attach aspirator bulb. c) Aspirator about 10 times. d) Shut petcocks. e) Remove aspirator bulb.
	3) Place chamber in <u>PLASTIC BAG</u> and <u>LABEL BAG</u> with <u>DATE</u> , <u>TIME</u> and <u>LOCATION</u>	
	c) Log information in Substep <u>3</u> on Attachment <u>3</u>	

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03
		PAGE 7 of 10

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

11. PARTICULATE AND IODINE SAMPLE:

NOTE: Charcoal cartridge efficiency is very sensitive to humidity. IF sample is required during high humidity, SHELTER sample from moisture. Inform personnel at TSC (or EOF) of weather conditions.

a) IF PARTICULATE and/or IODINE sample is required:

- 1) Obtain BATTERY POWERED AIR SAMPLER
- 2) LOAD SAMPLER with a PARTICULATE FILTER and SILVER ZEOLITE cartridge

a) IF PARTICULATE and/or IODINE sampling is NOT required, GO TO Step 12

NOTE: The FLOW RATE for each sampler is listed on the SIDE of each sampler.

- b) Connect SAMPLER CABLES to the vehicle's BATTERY TERMINAL
- c) Turn sampler ON and collect 10 ft³
- d) After collection of 10 ft³, turn air sample OFF
 - 1) Disconnect sampler cables
- e) Place IODINE cartridge and PARTICULATE filter in a plastic bags and label:
 - 1) DATE, TIME, VOLUME and LOCATION

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03
		PAGE 8 of 10

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

f) Log information in Substep e
on Attachment 3

12. ACTIVITY DETERMINATION:

a) IF air sample ANALYSIS is
required in FIELD, proceed
to a LOW BACKGROUND AREA

a) If sample analysis is NOT
required, return sample to
the Security Building as soon
as practical.

b) Turn ON EBERLINE RM-14 meter
and allow to stabilize

c) Determine BACKGROUND CPM

NOTE: Air sample MUST have been taken using SILVER ZEOLITE cartridge
to use this method for analysis.

d) Hold SILVER ZEOLITE cartridge
ONE-QUARTER INCH from DETECTOR
with end of cartridge where
air sample entered, facing
the detector

e) Observe the GROSS CPM and
determine NET activity (CPM)

$GROSS\ CPM - BACKGROUND = \underline{Net\ CPM}$

f) Refer to Attachment 4 to
determine the EQUIVALENT
I-131 activity in uCi/ml

f) IF Net CPM is TOO LARGE to
locate on Attachment 3,
DIVIDE the CPM by a power
of 10 to get on the graph,
then multiply the activity
(uCi/ml) by the same power
of 10.

g) Place sample in a poly bag
and LABEL DATE, TIME, VOLUME
and LOCATION on the sample

NUMBER EPIP-4.16	PROCEDURE TITLE OFFSITE MONITORING	REVISION 03
		PAGE 9 of 10

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

h) Log the analysis results and the DATE, TIME, LOCATION from Substep g on Attachment 3

13. SOIL DEPOSITION:

a) If a soil sample is requested, obtain a sample by marking off an approximate ONE SQUARE FOOT area

a) GO TO Step 14

b) REMOVE the top 1/4 to 1/2 INCH LAYER OF SOIL

1) Place soil in a clean poly bag

c) Mark sample with DATE, TIME, and LOCATION

d) Save sample for lab analysis

14. TRANSMIT DATA:

a) Results of all surveys OR in-field sample analysis will be transmitted to TSC (or EOF) as soon as possible

15. LABORATORY ANALYSIS OF SAMPLES:

a) All samples will be saved for future analysis at laboratory facilities

b) Bag all samples in a clean poly bag

c) Ensure samples are labeled with DATE, TIME, LOCATION and VOLUME (if applicable)

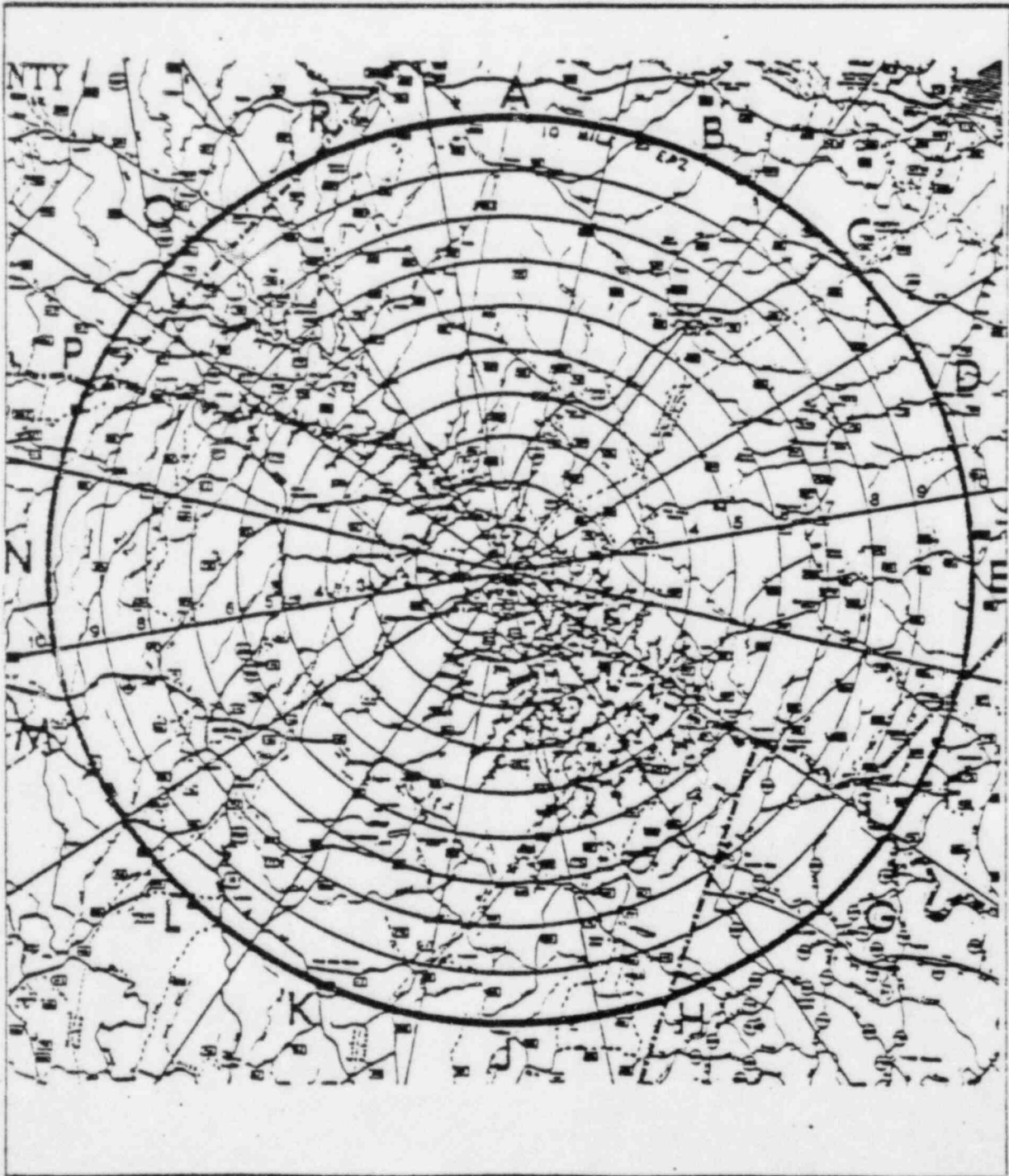
d) Return all samples to the Security Building as requested or as time and location permits

IF EOF is NOT activated return samples to the plant (Health Physics Office)

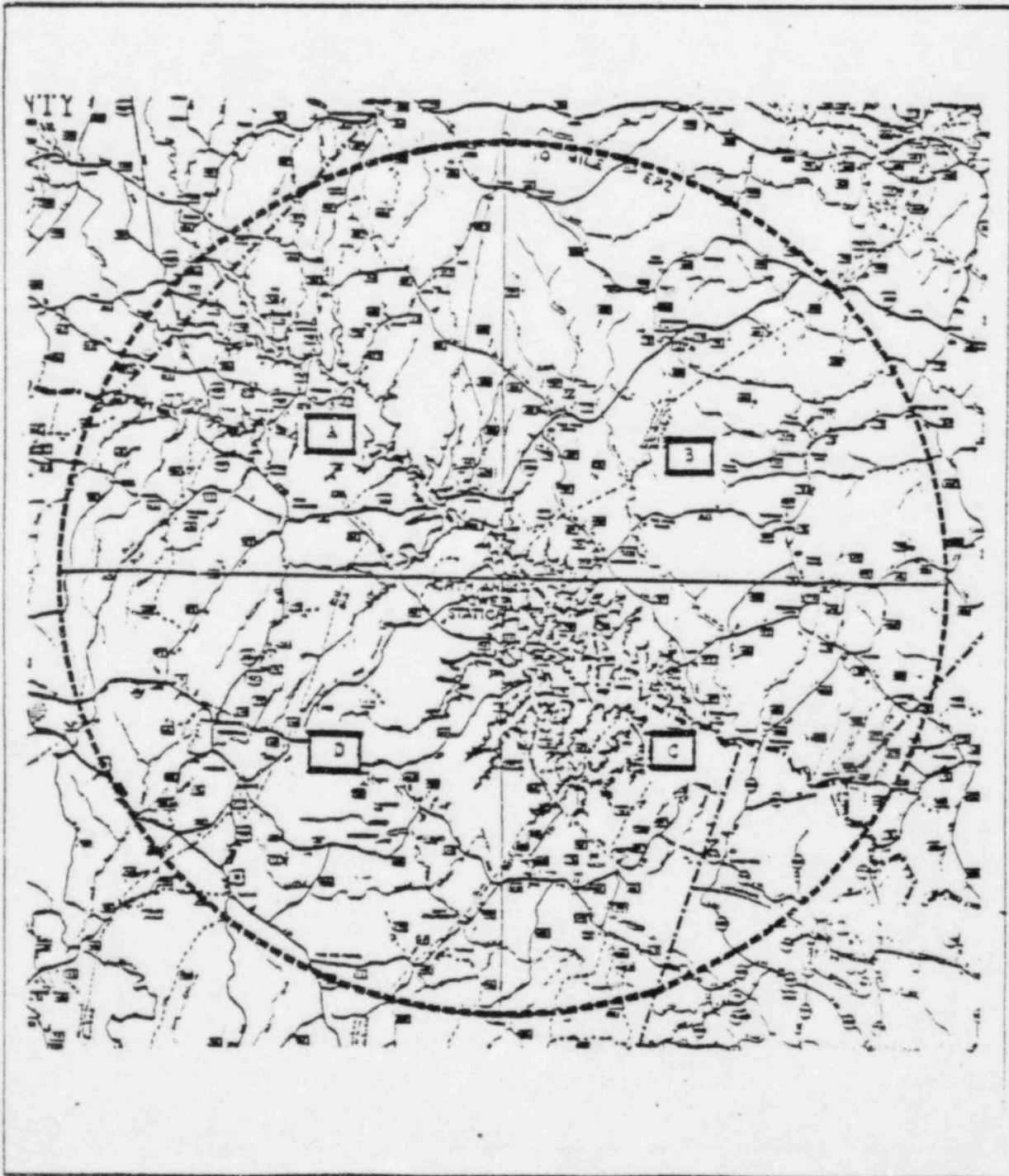
<p>NUMBER EPIP-4.16</p>	<p>PROCEDURE TITLE OFFSITE MONITORING</p>	<p>REVISION 03</p>
		<p>PAGE 10 of 10</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
16.	<p>CONTINUED SAMPLING: a) Continue sampling as requested by TSC (or EOF)</p>	
17.	<p>ADMINISTRATIVE: a) All procedures and forms used for offsite monitoring should be returned to the Radiological Assessment Director at TSC or the Radiological Assessment Coordinator</p>	
18.	<p>PROCEDURE COMPLETION: a) COMPLETED BY: _____ DATE: _____ TIME: _____</p>	
<p>END</p>		

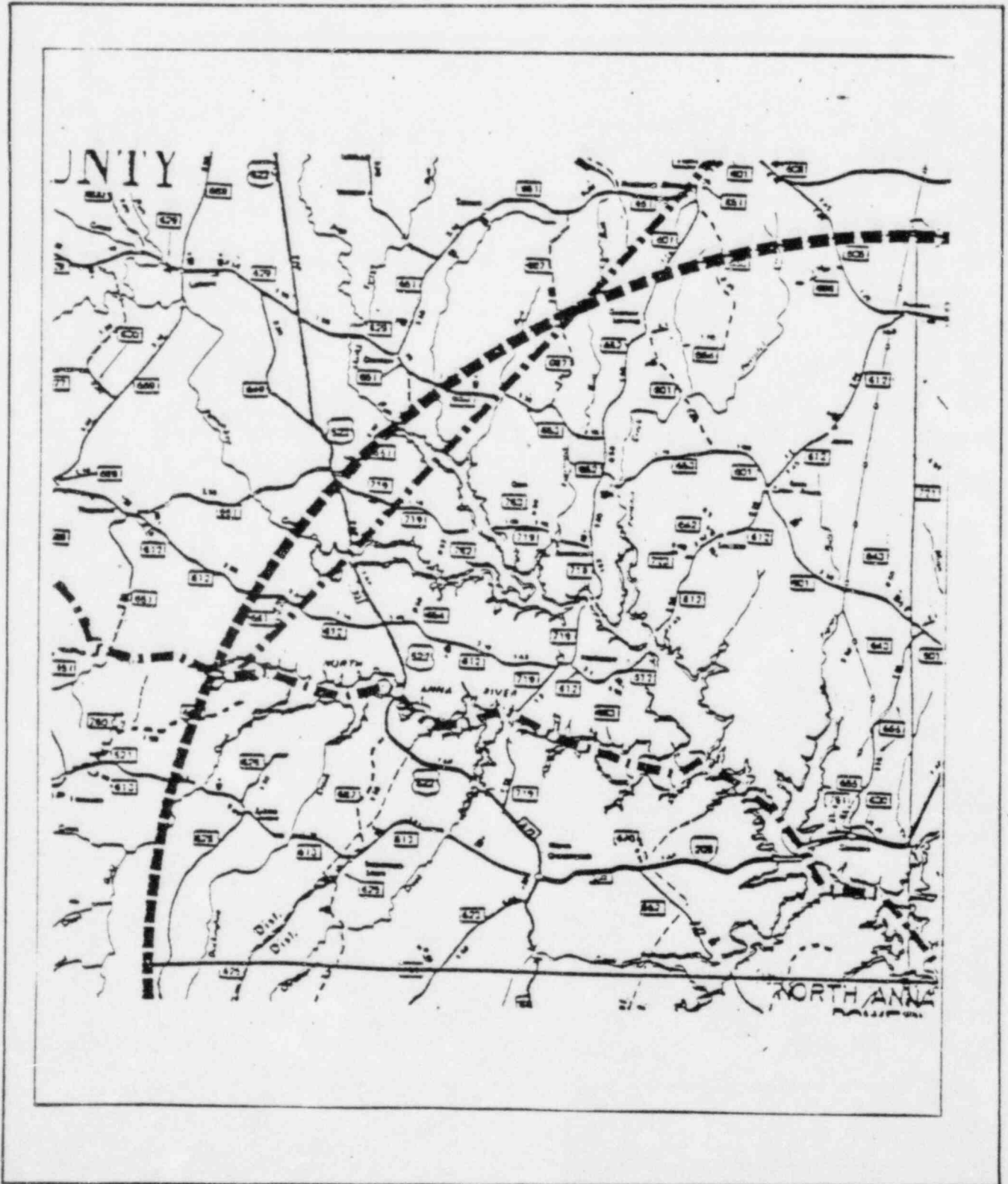
NUMBER EPIP-4.16	ATTACHMENT TITLE SECTOR MAP OF NORTH ANNA POWER STATION	REVISION 03
ATTACHMENT 1		PAGE 1 of 6



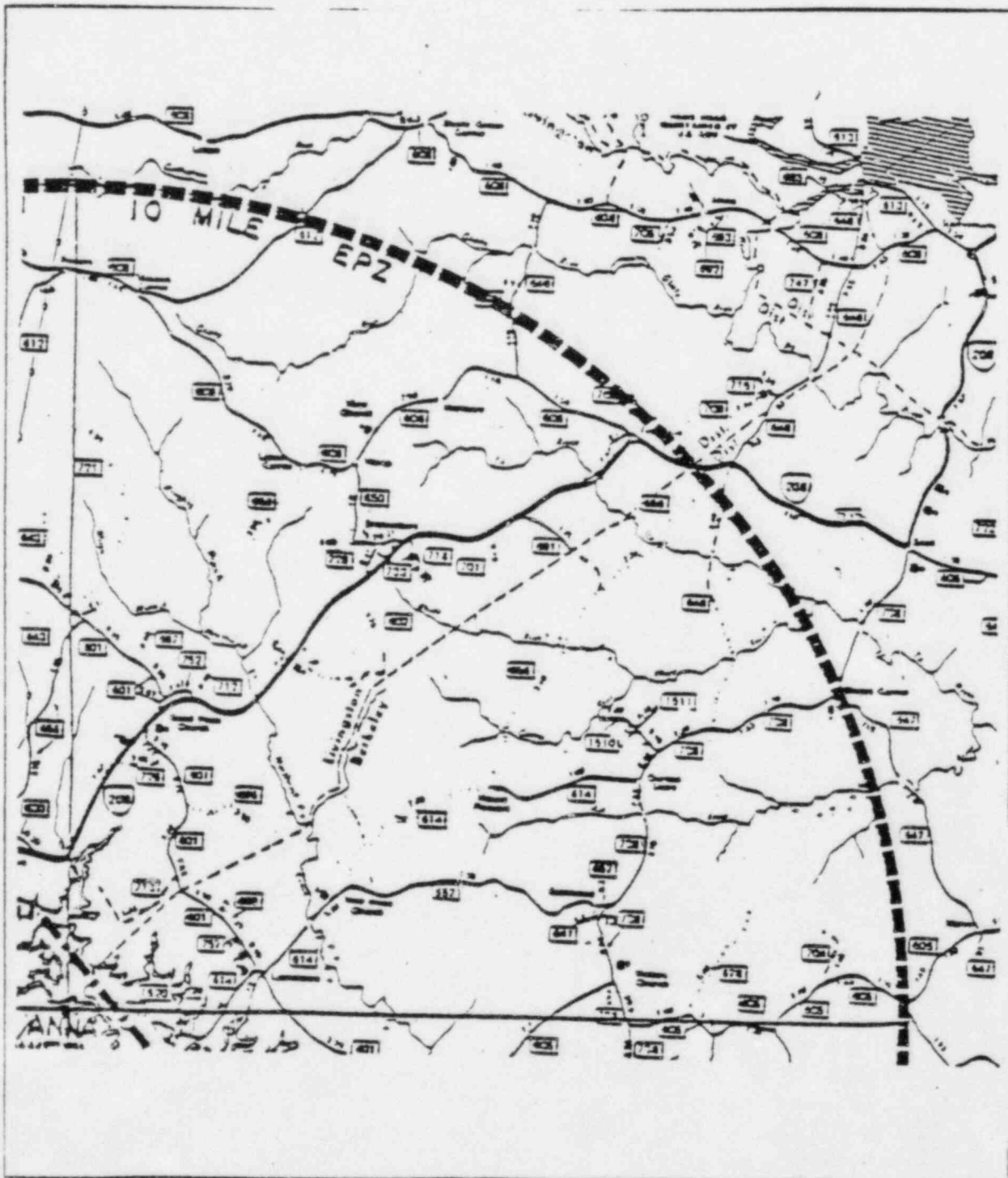
<p>NUMBER EPIP-4.16</p>	<p>ATTACHMENT TITLE GRID MAP OF NORTH ANNA POWER STATION</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>		<p>PAGE 2 of 6</p>



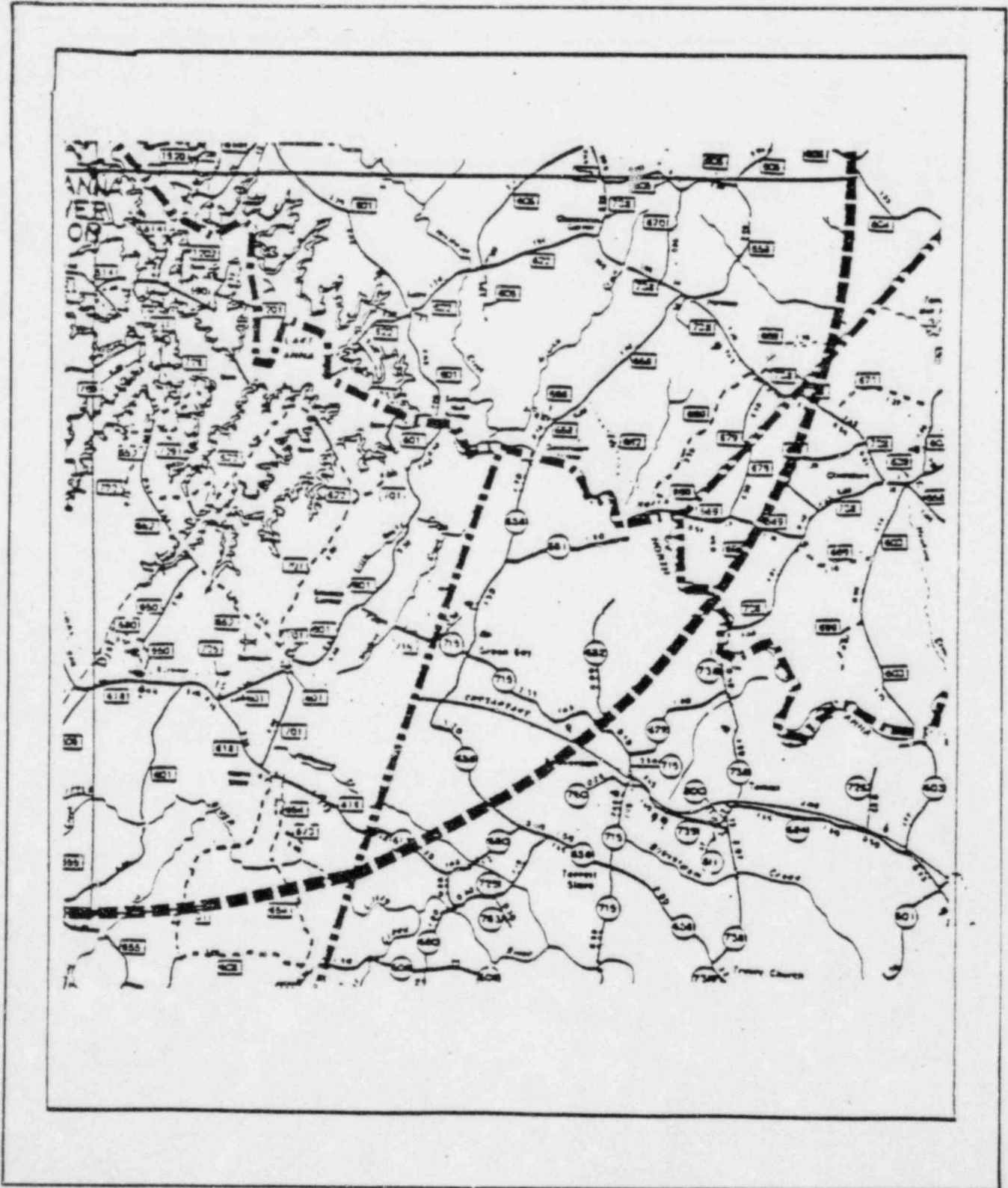
NUMBER EPIP-4.16	ATTACHMENT TITLE GRID MAP A WITH 10-MILE EPZ LINE	REVISION 03
ATTACHMENT 1		PAGE 3 of 6



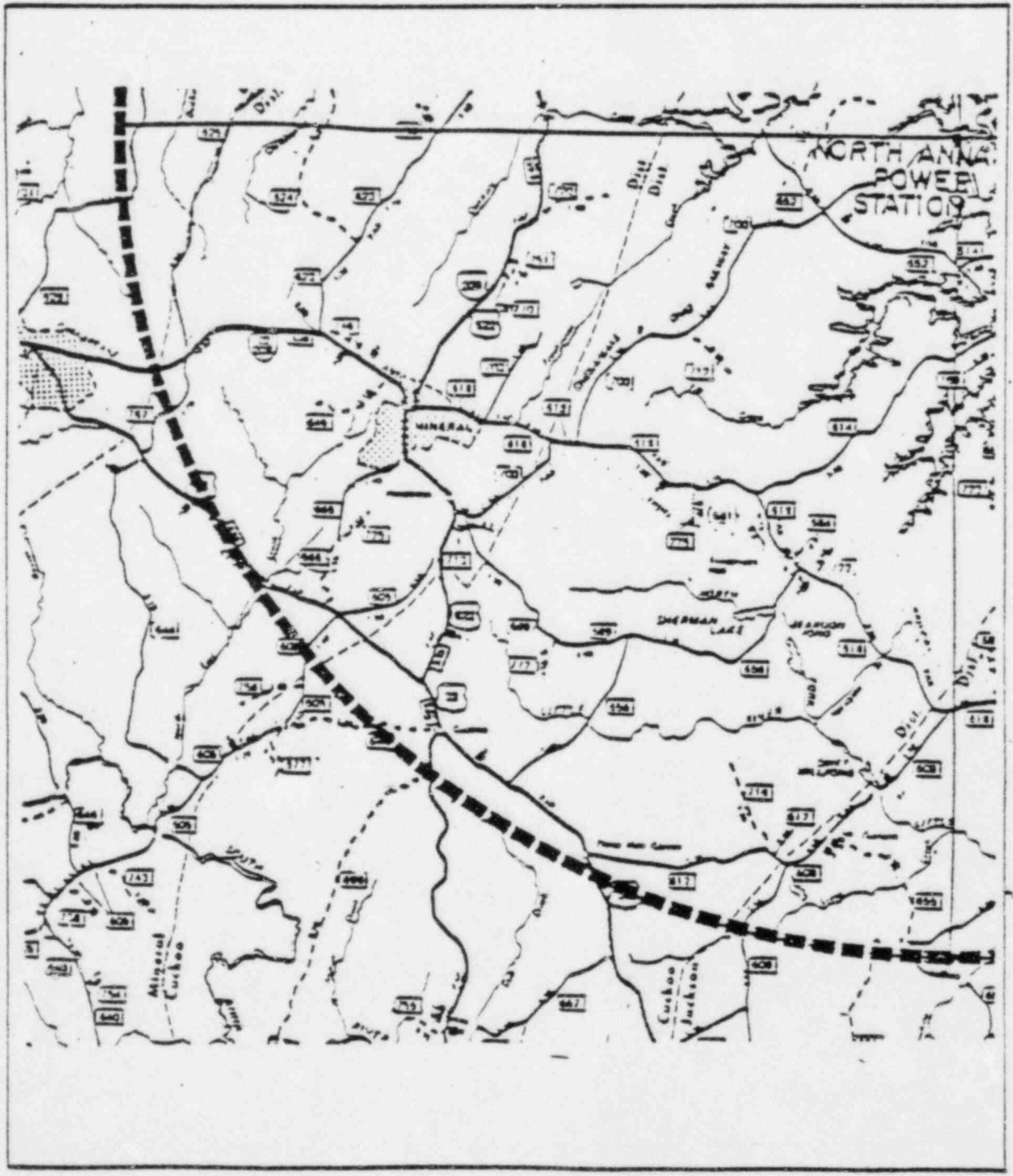
NUMBER EPIP-4.16	ATTACHMENT TITLE GRID MAP B WITH 10-MILE EPZ LINE	REVISION 03
ATTACHMENT 1		PAGE 4 of 6



NUMBER EPIP-4.16	ATTACHMENT TITLE GRID MAP C WITH 10-MILE EPZ LINE	REVISION 03
ATTACHMENT 1		PAGE 5 of 6



NUMBER EPIP-4.16	ATTACHMENT TITLE GRID MAP D WITH 10-MILE EPZ LINE	REVISION 33
ATTACHMENT 1		PAGE 6 of 6



NUMBER EPIP-4.16	ATTACHMENT TITLE LOCATION OF PRESELECTED SAMPLE LOCATIONS	REVISION 03
ATTACHMENT 2		PAGE 1 of 2

Sector A

1. At the intersection of Route 601 and 643, Hailey Mill Road.
2. Approximately 1.0 mile North intersection of Routes 655 and 208 on Route 655.

Sector B

3. At the intersection of Routes 601 and Route 208 at Good Hope Church.
4. On Route 208 at Bethal Church.

Sector C

5. On Route 713 South, approximately 0.5 miles from the intersection of Route 713 and Route 601.

Sector D

6. On Route 601 East, approximately 0.75 miles from intersection of Routes 601 and Route 614.
7. At the intersection of Route 601 and Route 614 in Lewistown.

Sector E

8. On Routes 601 East, approximately 4.0 miles from Good Hope Church and 0.5 mile from Lewistown.
9. On Route 614 South, approximately 0.75 mile from intersection of Routes 601 and 614.

Sector F

10. At the intersection of Route 601 and 622 in Levy.
11. At the end of Route 1520 (lakefront), approximately 0.3 from the intersection of Route 614 and Route 601.

Sector G

12. At the end of 690. A private access road, a Lake Anna sign and the presence of garbage dumpsters mark the location.

Sector J

13. At the intersection of Route 652 and Route 614 in Sector J.

NUMBER EPIP-4.16	ATTACHMENT TITLE LOCATION OF PRESELECTED SAMPLE LOCATIONS	REVISION 03
ATTACHMENT 2		PAGE 2 of 2

Sector J

14. On Route 614 South, approximately 1.25 miles from intersection of Route 652 and Route 614.

Sector H

15. At the intersection of Routes 652 and Route 614 in Sector H.

Sector K

16. On Route 652, approximately 1.0 mile Southeast of the intersection of Route 652 and Route 700.

Sector L

17. Laurel Hill Church, approximately 0.25 mile Southeast of the intersection of Routes 700 and 652. Sector M

Sector M

18. At the intersection of Route 652 and C&O Railroad, approximately 0.125 mile Northwest intersection of Routes 652 and 700

Sector N

19. At the Trailer Park on Route 652, approximately 0.25 mile Northwest of the intersection of Route 700 and 652.
20. On Route 685, approximately 0.5 mile North of the intersection of Routes 652 and 685.

Sector P

21. Route 685, approximately 1.90 mile North of the intersection of Routes 652 and 685.
22. At Edgewood Church, approximately 1.75 miles Northwest of the intersection of Routes 652 and 700.

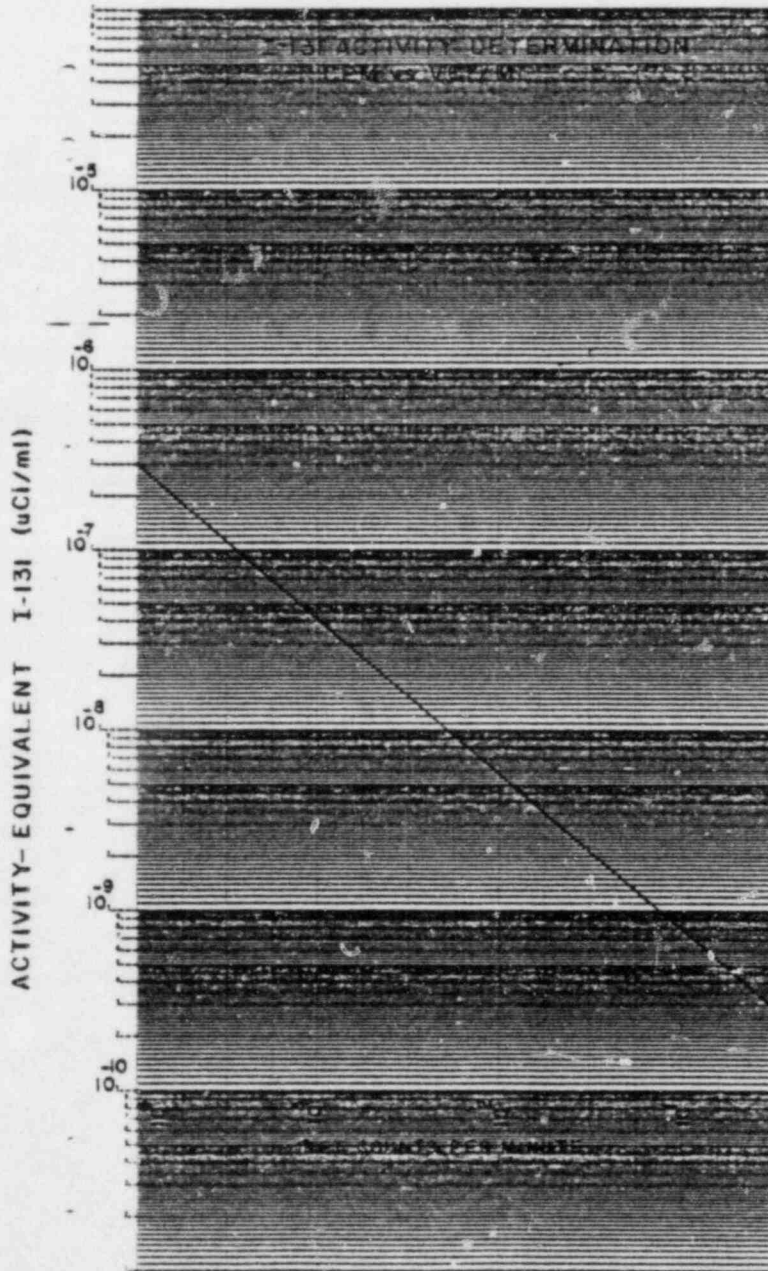
Sector Q

23. On Route 208 East, approximately 1.6 mile from the intersection of Routes 652 and 208.

Sector R

24. At the intersection of Route 655 and Route 208 in Glenora.

<p>NUMBER EPIP-4.16</p>	<p>ATTACHMENT TITLE I-131 ACTIVITY DETERMINATION</p>	<p>REVISION 03</p>
<p>ATTACHMENT 4</p>		<p>PAGE 1 of 1</p>



VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.17	PROCEDURE TITLE MONITORING OF OSC AND TSC (With 2 Attachments)	REVISION 03 <hr/> PAGE 1 of 6
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PURPOSE

Provide initial and periodic monitoring of the Technical Support and Operational Support Center.

USER

Members of the In-Plant Monitoring Team.

ENTRY CONDITIONS

Activation by EPIP-4.01, Radiological Assessment Director Controlling Procedure, or EPIP-4.02 Radiation Protection Supervisor Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED 	APPROVED  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	DATE 05-24-83
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NUMBER EPIP-4.17	PROCEDURE TITLE MONITORING OF OSC AND TSC	REVISION 03
		PAGE 2 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
1.	INITIATE PROCEDURE:	
	a) Initiated By: _____	
	Date: _____	
	Time: _____	
2.	INITIAL SURVEY	
	a) <u>IF</u> emergency is classified as an <u>ALERT OR GREATER</u> , initial survey of TSC or OSC is required	
	b) Obtain portable survey equipment from Health Physics Instrument locker.	
	1) Portable air sampler with Silver Zeolite cartridge and particulate filter	
	2) Portable survey meter	
	3) RM-14 with H.P. 210 probe	
	4) Obtain envelopes and smear paper	
	c) Perform instrument operability checks	
	1) Battery check	
	2) Current calibration sticker	
	3) Source check, if available	
	d) Proceed to the TSC or OSC	

NUMBER EPIP-4.17	PROCEDURE TITLE MONITORING OF OSC AND TSC	REVISION 03
		PAGE 3 of 6

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

2. (CONTINUED)

- 1) TSC - 2nd floor of Records Bldg.
- 2) OCS - 3rd floor of Maintenance Building
- e) Perform following survey using Attachment 1 to record data
 - 1) Smear survey
 - 2) Airborne particulate and iodine
 - 3) Direct radiation

3. ACCESS CONTROL

- | | |
|---|--|
| <ol style="list-style-type: none"> a) <u>IF</u> the emergency is radiological in nature establish access control of emergency center b) Position RM-14 at entrance to the center and post sign requiring monitoring prior to entrance | <ol style="list-style-type: none"> a) If emergency is not radiological in nature, <u>GO TO</u> Step <u>4</u>. |
|---|--|

4. COMPLETE SURVEY

- a) Complete survey form, including smear counting, and report results to the Radiation Protection Supervisor

5. PROTECTIVE MEASURES

- | | |
|--|--|
| <ol style="list-style-type: none"> a) <u>IF</u> initial survey detects direct radiation levels of <u>GREATER THAN</u> or equal to <u>2 mR/HR</u>: | <ol style="list-style-type: none"> a) If Dose Rates are less than 2 mR/HR, <u>GO TO</u> Substep <u>b</u>. |
|--|--|

NUMBER EPIP-4.17	PROCEDURE TITLE MONITORING OF OSC AND TSC	REVISION 03
		PAGE 4 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
5.	(CONTINUED) 1) Provide DOSE RATE METER to the Radiological Assessment Director in <u>TSC OR</u> to the <u>OSC Director</u> at the OSC 2) Obtain a supply of self-reading dosimeters and supply them to each individual in the Emergency Center who does not currently have one <u>AND</u> Record name and TLD# of the individual, date, dosimeter number and initial reading on Attachment <u>2</u> 3) Return Attachment <u>2</u> to dose control to allow update of daily issue card. 4) Notify Radiation Protection Supervisor immediately of radiation levels b) <u>IF</u> smear survey indicates contamination <u>GREATER THAN</u> 1000 dpm/100 cm ² , 1) Rope off contaminated area 2) Issue protective clothing as required. c) <u>AIR SAMPLE</u> exceeds or equal <u>0.25 MPC Levels</u> 1) Inform Radiation Protection Supervisor immediately of high airborne activity levels 2) Supply respiration protection as required by Radiation Protection Supervisor	2) <u>IF</u> individual has been issued a self-reader, <u>GO TO</u> Substep <u>b</u> .

NUMBER EPIP-6.17	PROCEDURE TITLE MONITORING OF OSC AND TSC	REVISION 03
		PAGE 5 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6.	REPEAT SURVEYS	
	<p>a) As a minimum, surveys should be conducted approximately every <u>HO</u>UR when radiological conditions cause a <u>Site</u> <u>OR</u> General Emergency</p> <p>b) Increase or decrease in survey schedule will be dependent on direction of plume and inplant airborne contamination and radiation levels</p> <p>1) When informed direction of plume has shifted toward TSC <u>OR</u> OSC, repeat survey</p>	<p>a) During an <u>Alert</u> condition survey schedule will be set up by the Radiation Protection Supervisor</p>
7.	HABITABILITY	
	<p>a) Should the Radiological Assessment Director determine either the TSC or OSC to be uninhabitable due to imminent radiological hazards, personnel will be evacuated to the following alternate emergency facilities as directed by the SEM:</p> <p>1) From the TSC, only the SEM and his designees shall report to the alternate TSC (Control Room).</p> <p>2) Any additional TSC personnel will report to the alternate OSC Unit 1 Emergency Switchgear Room.</p> <p>3) All personnel evacuated from the OSC will report to the alternate OSC (Unit 1 Emergency Switchgear Room).</p> <p>b) Health Physics shall monitor the alternate OSC using instructions previously given in this EPIP as a guideline. Survey information shall be documented on Attachment <u>1</u> of this procedure.</p>	

<p>NUMBER EPIP-4.17</p>	<p>PROCEDURE TITLE MONITORING OF OSC AND TSC</p>	<p>REVISION 03</p>
		<p>PAGE 6 of 6</p>

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

8. ADMINISTRATION

- a) Complete all survey forms, include instrument used and serial number, date, time and initial
- b) Return all survey and analysis data to the Radiation Protection Supervisor
 - 1) IF analysis of sample taken with the survey, is required, insure analysis data is presented with the survey forms as soon as possible after completion of analysis.
- c) Terminate EPIP-4.17

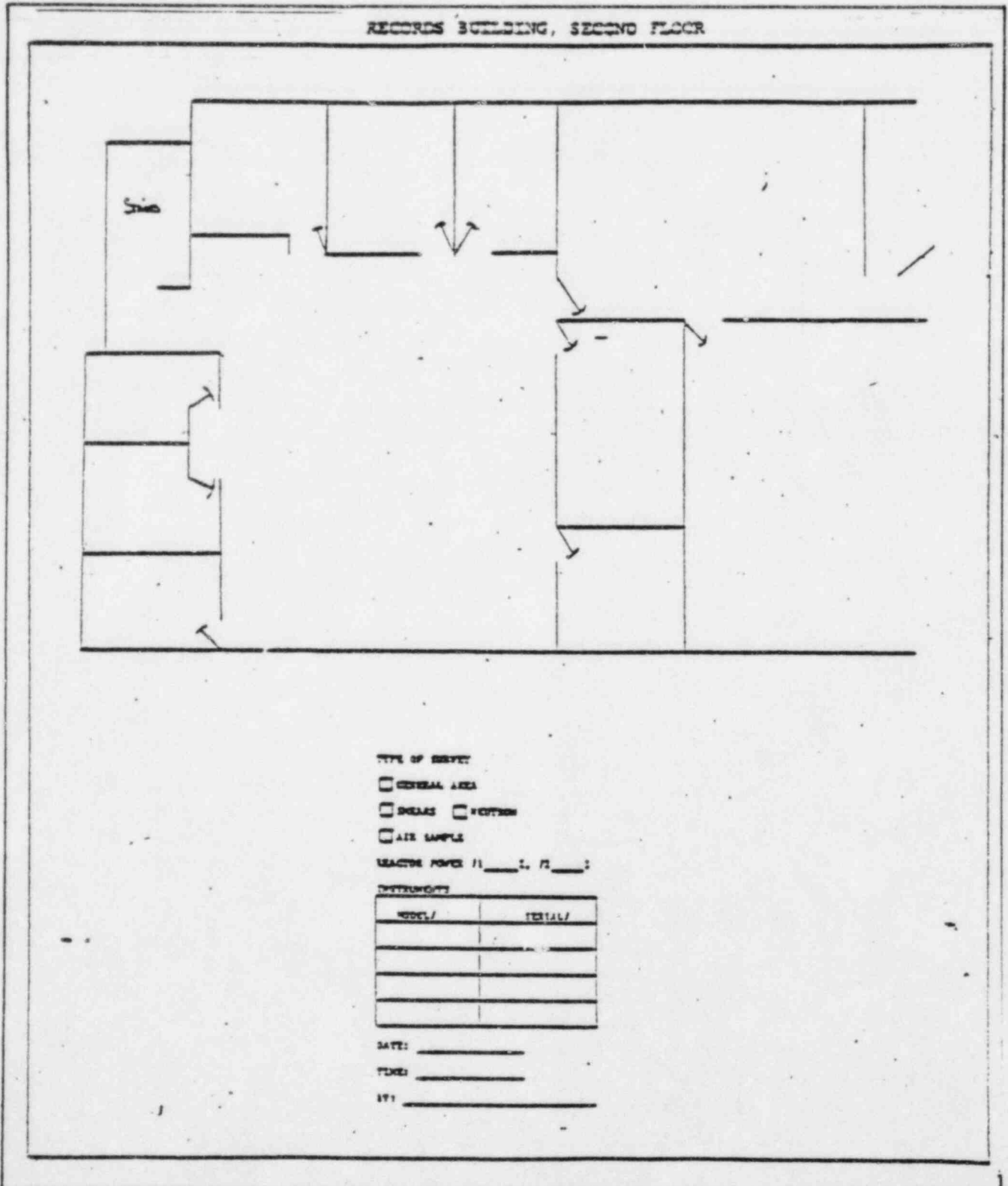
Completed By: _____

Date: _____

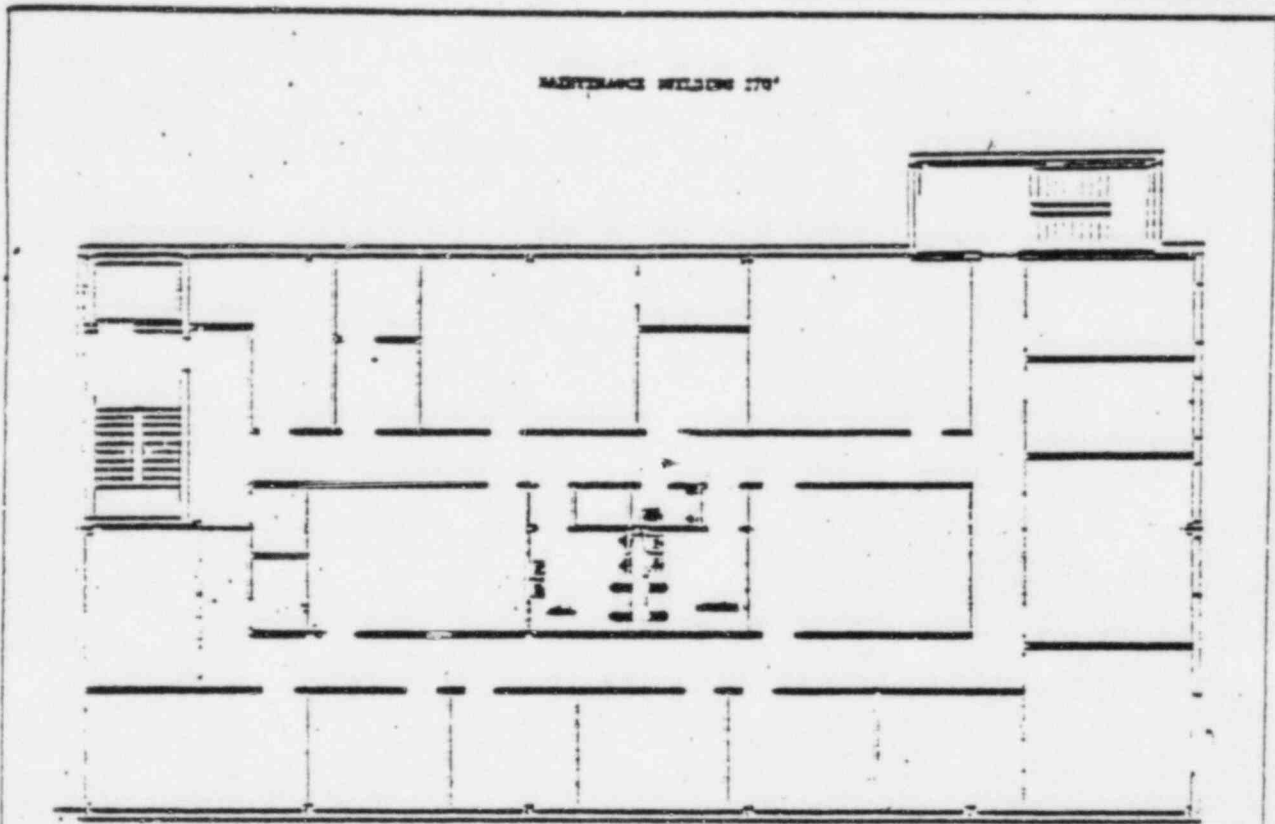
Time: _____

- d) Forward this EPIP-4.17 with all attachments to Radiation Protection Supervisor

NUMBER EPIP-4.17	ATTACHMENT TITLE SURVEY MAP OF TSC	REVISION 03
ATTACHMENT 1		PAGE 1 of 3



<p>NUMBER EPIP-4.17</p>	<p>ATTACHMENT TITLE SURVEY MAP OF OSC</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>		<p>PAGE 2 of 3</p>



TYPE OF SURVEY
 GENERAL AREA
 SURFACE INTERIOR
 AIR SAMPLE
 REACTION POINT (1) _____ (2) _____

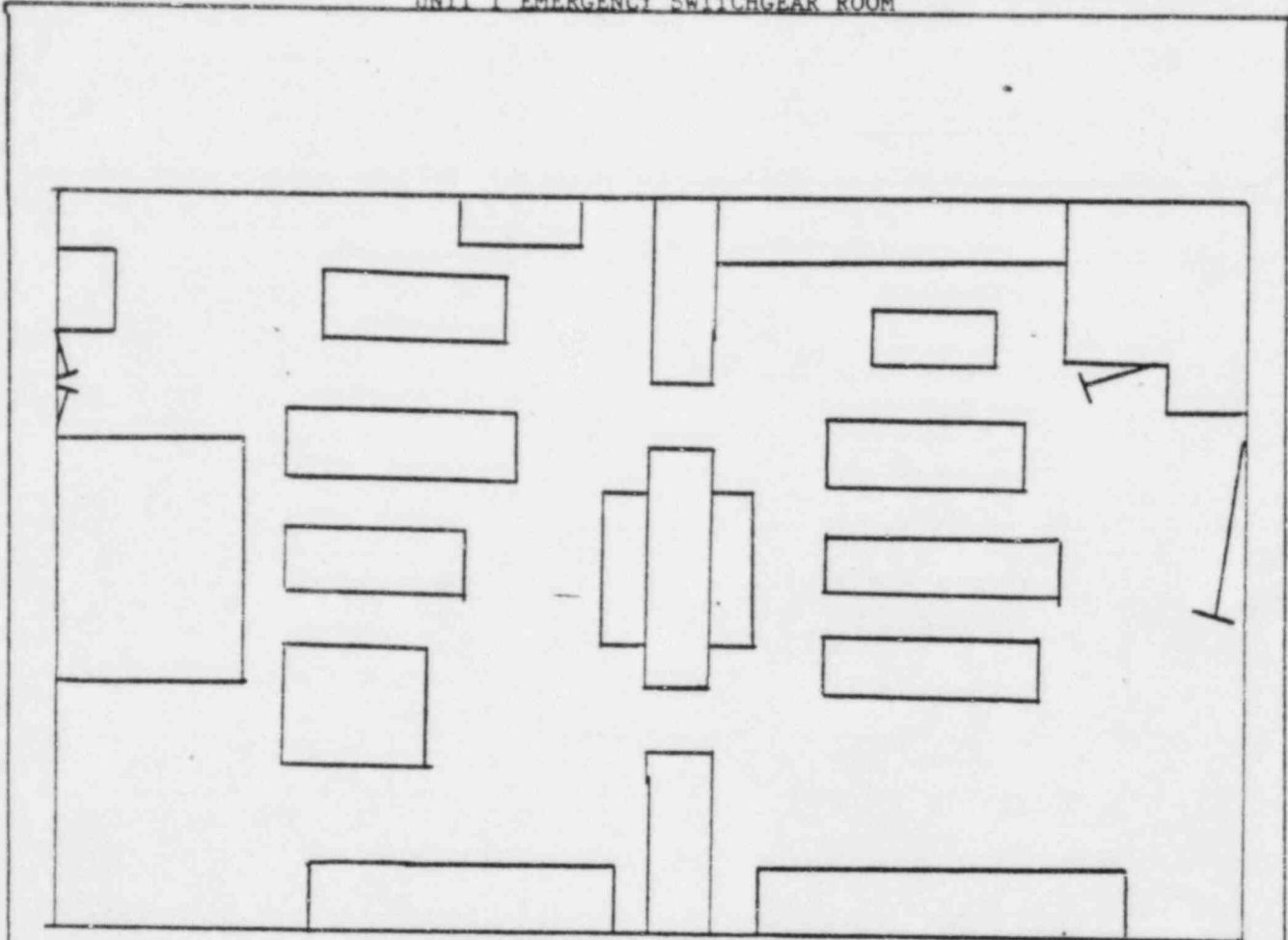
DESCRIPTION

NO./	TEXT/
1	

DATE: _____
 TIME: _____
 BY: _____

<p>NUMBER EPIP-4.17</p>	<p>ATTACHMENT TITLE SURVEY MAP OF ALTERNATE OSC</p>	<p>REVISION 03</p>
<p>ATTACHMENT 1</p>		<p>PAGE 3 of 3</p>

UNIT 1 EMERGENCY SWITCHGEAR ROOM



TYPE OF DEFECT

- GENERAL AIDS
- OVERLOAD VIBRATION
- AIR SAMPLE

REACTIVE POWER IS _____ L. IS _____ I

INTERCOMPT

MODEL	TOTAL

DATE: _____

TIME: _____

BY: _____

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER</p> <p>EPIP-4.18</p>	<p>PROCEDURE TITLE</p> <p>MONITORING OF EOF (With 3 Attachments)</p>	<p>REVISION</p> <p>03</p> <hr/> <p>PAGE</p> <p>1 of 7</p>
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PURPOSE

Provide Radiation Protection coverage for personnel manning the EOF.

USER

Member of the In-Plant Monitoring Team.

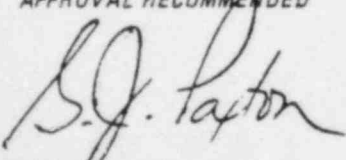
ENTRY CONDITIONS

Activation by EPIP-4.02, Radiation Protection Supervisor Controlling Procedure.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
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NUMBER EPIP-4.18	PROCEDURE TITLE MONITORING OF EOF	REVISION 03 PAGE 2 of 7
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:

- a) BY: _____
 DATE: _____
 TIME: _____

NOTE: Technician sent to monitor and issue dosimeter at EOF will remain there until relieved.

2. REQUEST BRIEFING:

- a) Request briefing with the Radiation Protection Supervisor as to the following:
- 1) Transportation to EOF
 - 2) Direction of plume if a radiological release has occurred

NOTE: If EOF is relocated, go to Step 10.

- 3) Protective equipment required at the EOF (PG's, respiratory protection, dosimetry)

3. OBTAIN MONITORING EQUIPMENT AND SUPPLIES:

- a) Obtain the following supplies needed at EOF
- 1) DOSIMETRY: approximately 25 self-reading low range dosimeters and dosimetr charger

NUMBER EPIP-4.18	PROCEDURE TITLE MONITORING OF EOF	REVISION 03
		PAGE 3 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
3.	(CONTINUED)	
	<p style="text-align: center;"><u>AND</u></p> <p style="text-align: center;">Approximately <u>25</u> freshly annealed TLD's</p> <ul style="list-style-type: none"> 2) PORTABLE DOSE RATE METER (0-1000 mR/hr) 3) RM-14 with H.P. <u>210</u> PROBE 4) PORTABLE AIR SAMPLER 5) A supply of <u>SILVER ZEOLITE</u> and filter paper 6) SMEARS and ENVELOPES 7) POLY-BAGS <ul style="list-style-type: none"> b) Perform operability check on instruments <ul style="list-style-type: none"> 1) Battery Check 2) Current Calibration Sticker 3) Source Check, if available 	
4.	INITIAL SURVEY:	
	<p><u>NOTE:</u> EOF should already be opened by security personnel. <u>IF</u> building is <u>NOT</u> open, contact security to obtain entry.</p> <ul style="list-style-type: none"> a) Proceed to the EOF b) Use survey map, Attachment <u>1</u> and perform the following survey: <ul style="list-style-type: none"> 1) Smear Survey 	

NUMBER EPIP-4.18	PROCEDURE TITLE MONITORING OF EOF	REVISION 03
		PAGE 4 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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4. (CONTINUED)

- 2) Load air sampler with SILVER ZEOLITE and particulate filter and obtain a 10ft³ air sample
- 3) Direct radiation survey
- c) Perform analysis on air sample
 - 1) Proceed to a low background area with the air sample and RM-14 meter
 - 2) Turn ON RM-14 and allow to stabilize
 - 3) Obtain a BACKGROUND CPM
 - 4) Hold SILVER ZEOLITE 1/4 INCH from DETECTOR with end of cartridge, where air sample entered, facing the detector
 - 5) Observe GROSS CPM and determine NET CPM

GROSS CPM - BACKGROUND = NET CPM

6) IF NET CPM is TOO LARGE to locate on Attachment 2, DIVIDE the CPM by a power of 10 to get on the graph and then MULTIPLY activity by the same power of 10

- 7) Place sample in a poly bag labeled with the DATE, TIME and VOLUME
- 8) LOG analysis results and DATE, TIME, INSTRUMENT USED and SERIAL NUMBER on Attachment 1

NUMBER EPIP-4.18	PROCEDURE TITLE MONITORING OF EOF	REVISION 03
		PAGE 5 of 7

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	d) REPORT RESULTS of the survey as soon as possible, to the Radiation Protection Supervisor	
5.	ACCESS CONTROL:	
	a) Set up access control point at entrance to the building 1) Personnel monitoring area with RM-14 2) Dosimetry issue point	
6.	ISSUE DOSIMETRY:	
	a) As VEPCO corporate and state officials arrive at the EOF, issue a TLD and a zeroed SELF-READING LOW RANGE DOSIMETER	a) IF EOF is activated prior to dosimetry issue, ensure all people in EOF obtain dosimetry.
	b) Complete Attachment <u>3</u> upon issuance of dosimetry	
7.	PROTECTIVE MEASURES:	
	a) IF area is found to be contaminated: 1) Rope off contaminated area 2) Request assistance from Radiation Protection Supervisor for decontamination and supply of protective clothing, if necessary 3) Supply protective clothing to the EOF Emergency Personnel as necessary	a) If area is not contaminated, <u>GO TO Step 8</u>

NUMBER EPIP-4.18	PROCEDURE TITLE MONITORING OF EOF	REVISION 03 PAGE 6 of 7
-------------------------	--	--------------------------------------

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

7. (CONTINUED)

b) AIR SAMPLE exceeds or is equal to
0.25 MPC Levels

- 1) Inform Radiation Protection Supervisor immediately of high airborne activity levels
- 2) Supply respiratory protection as required by the Radiation Protection Supervisor.

8. REPEAT SURVEYS:

a) As a minimum, surveys should be conducted approximately every HOURLY when radiological conditions cause a SITE or GENERAL emergency

a) During an ALERT condition, survey schedule will be set by Radiation Protection Supervisor.

b) INCREASE or DECREASE in survey schedule will depend on DIRECTION of PLUME

- 1) When informed that DIRECTION OF PLUME has shifted toward EOF repeat survey
- 2) IF the event is a radiological emergency, take direct readings in general area every 15-30 minutes, noting any large increase

9. ADMINISTRATION:

a) Complete all surveys and transmit data to Radiation Protection Supervisor

- 1) Record an Attachment 1 DATE, TIME, INSTRUMENT and SERIAL NUMBER and INITIAL

<i>NUMBER</i> EPIP-4.18	<i>PROCEDURE TITLE</i> MONITORING OF EOF	<i>REVISION</i> 03
		<i>PAGE</i> 7 of 7

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

9. (CONTINUED):

b) Return air samples to the
plant for further analysis

10. PROCEDURE COMPLETION:

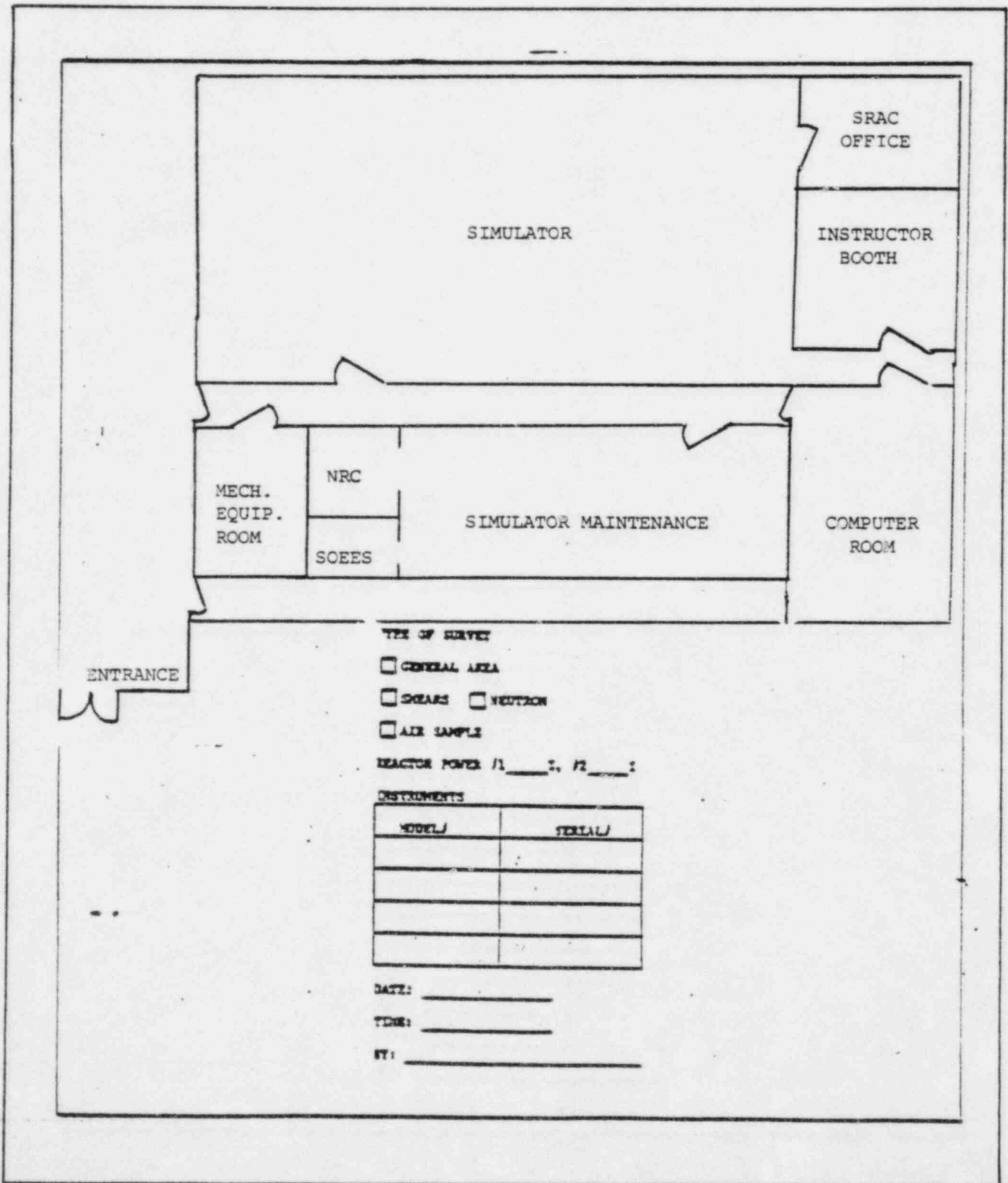
a) COMPLETED BY: _____

DATE: _____

TIME: _____

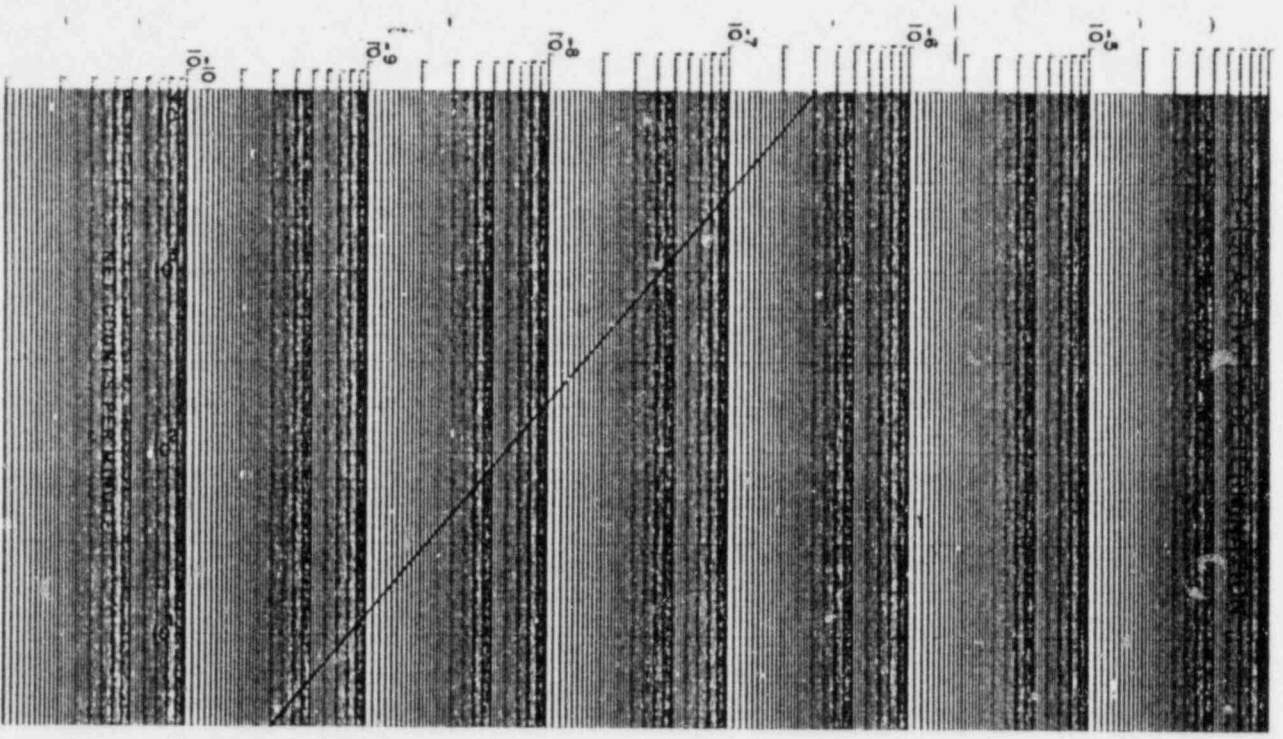
END

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.18	SURVEY MAP EOF SIMULATOR	03
ATTACHMENT		PAGE
1		1 of 1



NUMBER EPIP-4.18	ATTACHMENT TITLE I-131 ACTIVITY DETERMINATION CPM VS UCI/ML	REVISION 03
ATTACHMENT 2		PAGE 1 of 1

ACTIVITY-EQUIVALENT I-131 (uCi/ml)



VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	PROCEDURE TITLE	REVISION
EPIP-4.19	USE OF RADIOS FOR HEALTH PHYSICS MONITORING (With No Attachments)	03
		PAGE
		1 of 5

PURPOSE

Explain use of portable and mobile radios and the radiophones in the emergency center (TSC, EOF).

USER

Radiological Assessment Director, Radiation Protection Supervisor, Health Physics Technician.

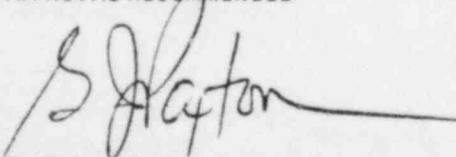
ENTRY CONDITIONS

Any one of the following:

1. Upon activation of the TSC and EOF.
2. Activation by Offsite, Onsite, Inplant Monitoring EPIP's.
3. Whenever radio communication is deemed necessary.

SAFETY RELATED**REVISION RECORD**

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED

APPROVED

 CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE
DATE

05-24-83

NUMBER EPIP-4.19	PROCEDURE TITLE USE OF RADIOS FOR HEALTH PHYSICS MONITORING	REVISION 03
		PAGE 2 of 5

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE PROCEDURE:

a) BY: _____

DATE: _____

TIME: _____

2. LOCATION OF RADIOS:

a) Location of PORTABLE RADIOS: a) GO TO Substep b1) One in the Health Physics
Office2) Two radios with the
Emergency Kits at the
Medical Center3) Spare radios may be
obtained from security
and/or operations, if
availableb) Location of MOBILE RADIOS: b) GO TO Substep c1) Station Health Physics
truck

2) Station Manager's vehicle

3) Spare mobile units may be
obtained from corporate
staff manning the EOF

c) Location of RADIOPHONES:

1) TSC

2) EOF

NOTE: IF FAILURE of mobile or portable radio occurs under field conditions, use public telephone as backup communications.

NUMBER EPIP-4.19	PROCEDURE TITLE USE OF RADIOS FOR HEALTH PHYSICS MONITORING	REVISION 03
		PAGE 3 of 5

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

3. OPERATION OF PORTABLE RADIO:

NOTE: All communications on the radios will take place on the Health Physics Emergency frequency.

- | | |
|---|---|
| <p>a) If a portable radio is to be used, turn the <u>SQUELCH</u> button on top of radio fully clockwise and turn CG switch to the position.</p> <p>b) Turn <u>VOLUME</u> switch on slowly until desired volume is obtained</p> <p>c) Turn <u>SQUELCH</u> till just inaudible</p> <p>d) Turn <u>frequency</u> switch to <u>1</u></p> <p>e) Identification number is located on the radio (ie. P-19)</p> <p>f) To communicate, press transmit switch on the side of the radio and repeat:</p> <p style="padding-left: 40px;">"Mobile P-19 to _____ Base"</p> <p style="padding-left: 40px;">1) The blank indicates the base manned by Health Physics personnel (i.e. TSC, EOF or Health Physics Office)</p> <p>g) After completion of radio transmission, complete by:</p> <p style="padding-left: 40px;"><u>"(Number of Portable Unit), Out"</u></p> | <p>a) If a mobile or radiophone is to be used, <u>GO TO</u> Step <u>4</u></p> |
|---|---|

NUMBER EPIP-4.19	PROCEDURE TITLE USE OF RADIOS FOR HEALTH PHYSICS MONITORING	REVISION 03
		PAGE 4 of 5

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: Length of field use with portable radios is approximately 1.5 hours of continuous use. Turn OFF radio when not in use.

4. OPERATION OF MOBILE UNITS:

- | | |
|--|--|
| <p>a) If a mobile radio unit is to be used, turn power switch <u>ON</u> (Green Button Up)</p> <p>b) To operate a mobile unit, press <u>IN</u> all the buttons at top of radio</p> <p>c) Turn <u>SQUELCH</u> on full</p> <p>d) Turn <u>VOLUME</u> on until desired level</p> <p>e) Turn <u>SQUELCH</u> down till inaudible</p> <p>f) Turn frequency switch to selector <u>1</u></p> | <p>a) If a radiophone is to be used, <u>GO TO</u> Step <u>5</u>.</p> <p>b) <u>IF</u> the buttons will not push in, leave them alone.</p> |
|--|--|

NOTE: Switch, on the microphone holder, must always be in the speaker position. Ensure truck is running when radio is on.

- g) To TRANSMIT, press switch on the side of the microphone to S and repeat:
- 1) "Mobile Unit (repeat the number of the vehicle) to _____ Base"
- h) To SIGN OFF after message transmission state "KD2499, OUT"

NUMBER EPIP-4.19	PROCEDURE TITLE USE OF RADIOS FOR HEALTH PHYSICS MONITORING	REVISION 03
		PAGE 5 of 5

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE: The individual making the call should sign off using his or her call number.

5. OPERATION OF RADIOPHONES:

NOTE: Radiophone selector switch should already be set to the operations channel.

- a) Set radiophone selector switch to the Emergency Channel.
- b) If a radiophone is to be used, Turn VOLUME switch to desired level . b) GO TO Step 6.
- c) To TRANSMIT:
 - 1) Press in TRANSMIT button on console.
 - 2) Repeat "TSC (or EOF) to Mobile (number of mobile unit)"
- d) To SIGN OFF:
 - 1) Repeat "KNBM 676, OUT"

NOTE: Do not disturb the other controls on the radiophone console.

6. PROCEDURE COMPLETION:

- a) COMPLETED BY: _____
- DATE: _____
- TIME: _____

END

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.20	PROCEDURE TITLE HEALTH PHYSICS ACTIONS FOR TRANSPORT OF CONTAMINATED INJURED PERSONNEL (With 4 Attachments)	REVISION 03
		PAGE 1 of 6

PURPOSE

To provide guidance for Health Physics personnel accompanying a contaminated injured individual to an offsite medical facility.

USER

Health Physics Technician.

ENTRY CONDITIONS

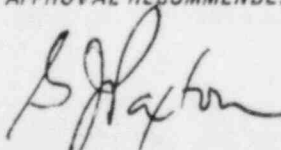
Any one of the following:

1. Activation by Station Operating Procedure.
2. Activation by Station Health Physics Procedure.
3. Activation by another EPIP.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

APPROVAL RECOMMENDED 	APPROVED  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	DATE 05-24-83
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NUMBER EPIP-4.20	PROCEDURE TITLE HEALTH PHYSICS ACTIONS FOR TRANSPORT OF CONTAMINATED INJURED PERSONNEL	REVISION 03 PAGE 2 of 6
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE EPIP-4.20:

- a) BY: _____
DATE: _____
TIME: _____

2. OBTAIN SURVEY RESULTS:

- a) IF Health Physics Procedure, H.P.-3.1.7. has been activated, obtain the survey results
- a) Continue with this procedure.

3. DISCONTINUE DECONTAMINATION:

- a) IF it has been determined that the individual is to be transported off-site, DISCONTINUE DECONTAMINATION effort and prepare for transportation

- b) Notify corporate Health Physics that contaminated/injured personnel are being taken to MCV by calling:

W. W. Cameron - 804/228-4530 home
- 804/771-4301 office
- 804/771-3199 CERC

or his alternate:

O. E. Hickman - 804/794-7291 home
- 804/771-4264 office

4. PREPARE INDIVIDUAL FOR TRANSPORTATION:

- a) IF individual is GROSSLY contaminated, continue with the instruction
- a) GO TO Substep b. If contamination is localized

NUMBER EPIP-4.20	PROCEDURE TITLE HEALTH PHYSICS ACTIONS FOR TRANSPORT OF CONTAMINATED INJURED PERSONNEL	REVISION 03
		PAGE 3 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	(continued)	
	1) Spread blanket or sheet over stretcher	
	2) Place contaminated individual on top of the blanket or sheet	2) <u>IF</u> unable to move individual from stretcher, wrap stretcher and individual in blanket or sheet.
	3) Wrap blanket or sheet loosely around individual	
	b) <u>IF</u> contamination is LOCALIZED minimize spread of contamination by covering area with cloth or sheet	
5.	REPLACE DOSIMETRY:	
	a) Remove individuals self-reading dosimetry and record readings on Attachment <u>1</u>	
	b) Replace TLD and self-reading dosimetry	
	c) Send self-reader and TLD to dose control for recordation and reading	
	d) Assess the need for personnel dosimetry for the rescue squad member.	
6.	OBTAIN SUPPLIES:	
	a) Obtain, if possible, the following list of supplies and equipment prior to transport:	

NUMBER EPIP-4.20	PROCEDURE TITLE HEALTH PHYSICS ACTIONS FOR TRANSPORT OF CONTAMINATED INJURED PERSONNEL	REVISION 03
		PAGE 4 of 6

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. (continued)
- 1) Poly Bags
 - 2) Cleaning Rags (diapers)
 - 3) Gloves, Booties, and coveralls
 - 4) RM-14 with a HP-210 probe and portable gamma survey instrument
7. MINIMIZE SPREAD OF CONTAMINATION:
- a) Advise the medical personnel of radiation and contamination problems with the individual
 - b) Advise, if necessary, the use of protective clothing (i.e., gloves) while performing first aid
 - c) Monitor all equipment or material used on the individual
8. DIRECT DRIVER TO MCV:
- a) Direct ambulance driver to take most direct route to I-64 EAST
 - b) Take I-95 SOUTH (Richmond - Petersburg Turnpike)
 - c) When close to Richmond use Attachment 3 to direct driver to MCV from I-95
 - 1) Leave I-95 SOUTH at Exit 10, Broad Street

NUMBER EPIP-4.20	PROCEDURE TITLE HEALTH PHYSICS ACTIONS FOR TRANSPORT OF CONTAMINATED INJURED PERSONNEL	REVISION 03 PAGE 5 of 6
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8.	(continued) 2) Turn right on College Street 3) Turn left on E. Marshall Street 4) Continue across 12th Street and then left into MCV parking lot	
9.	RELAY VITAL INFORMATION TO MCV: a) Use the <u>HEAR</u> system in route to provide medical information, radiological information, and estimated time of arrival	
10.	MONITOR RESCUE SQUAD PERSONNEL: a) Prior to arrival at MCV, monitor the rescue squad members for contamination 1) If members are found to be contaminated, use protective clothing to minimize spread <u>AND</u> request use of decontamination facilities at MCV upon arrival.	1) Continue with this instruction.
11.	RELAY RADIOLOGICAL INFORMATION: a) Upon arrival at MCV relay a) radiological information to the <u>Incoming Monitoring Specialist</u> in Area <u>A</u> <u>OR</u> (see Attachment 4) the Radiation Safety Director in Area <u>B</u>	. <u>IF</u> the Emergency Plan for MCV is <u>NOT</u> activated contact the MCV Hospital Superintendent (770-5025)

<p>NUMBER EPIP-4.20</p>	<p>PROCEDURE TITLE HEALTH PHYSICS ACTIONS FOR TRANSPORT OF CONTAMINATED INJURED PERSONNEL</p>	<p>REVISION 03</p>
		<p>PAGE 6 of 6</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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11. (continued)

- b) Request the need for further assistance or information required by the Radiation Safety Director

12. MONITOR TRANSPORTING VEHICLE:

- a) Survey the vehicle inside and outside
 - 1) IF the vehicle is found contaminated outside, contact MCV, decon before return to the station

NOTE: Contamination levels must be less than 1000 dpm/100cm²

- 2) IF vehicle is found to be contaminated on the inside, return to the station for further decontamination

13. ADMINISTRATION:

- a) Gather all information and survey results
- b) Present all information and survey to the Radiation Protection Supervisor upon arrival at the station

14. PROCEDURE COMPLETION:

- a) COMPLETED BY: _____
- DATE: _____
- TIME: _____

END

NUMBER EPIP-4.20	ATTACHMENT TITLE PATIENT RADIATION AND CONTAMINATION REPORT	REVISION 03
ATTACHMENT 1		PAGE 1 of 1

DATE: _____ TIME: _____

NAME: _____

TLD NUMBER: _____

EXPOSURE

Estimated Whole Body Exposure (from Self-Reader) _____ mRem

CONTAMINATION

<u>Location</u>	<u>cpm OR nr/hr</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

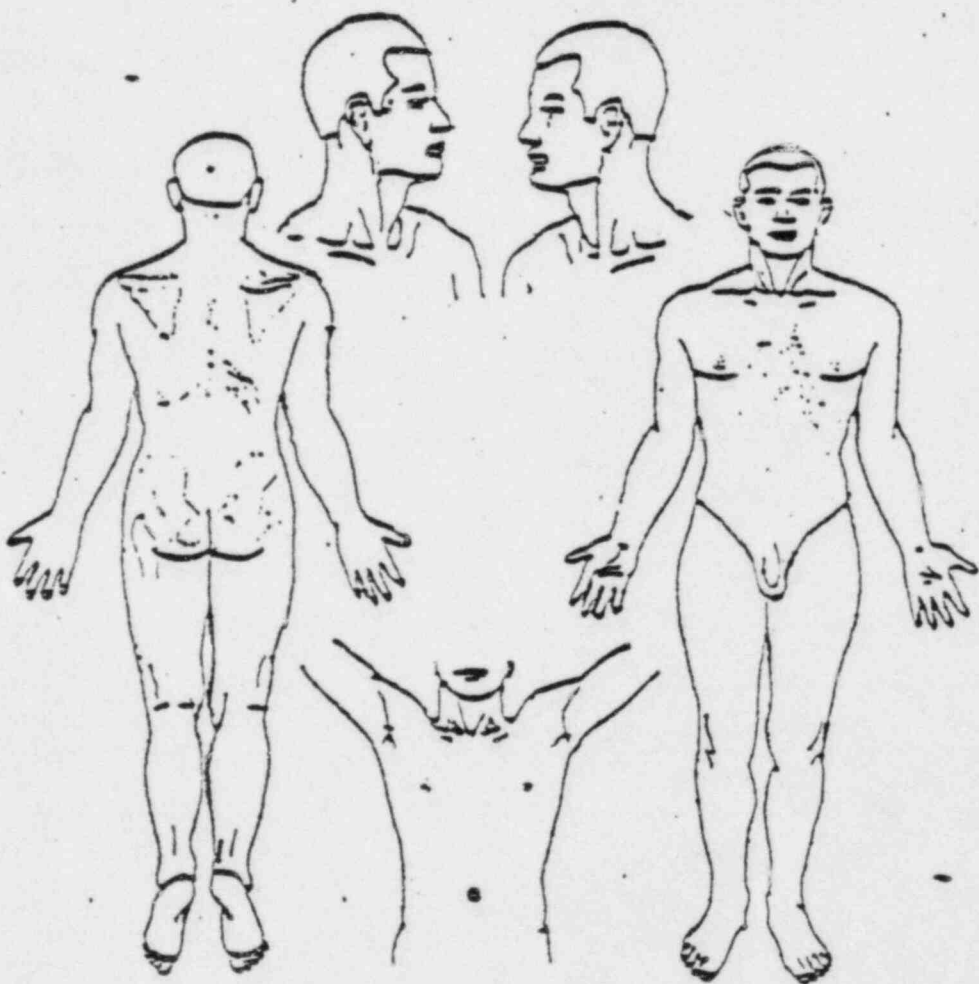
Instrumentation Used: _____

INTERNAL CONTAMINATION

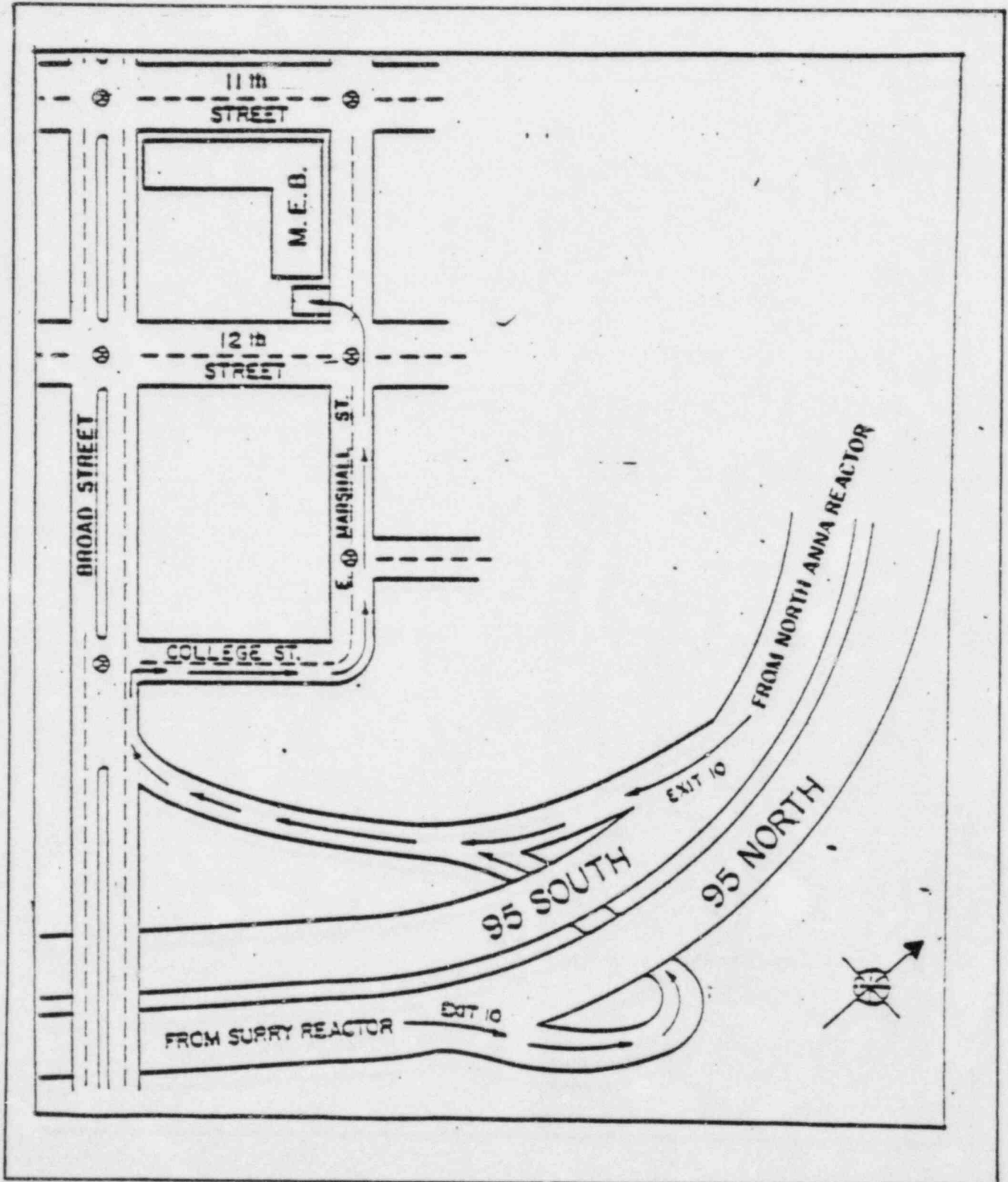
YES/NO: _____

Path of Contamination (Wound, Ingestion, Inhalation): _____

<p><i>NUMBER</i> EPIP-4.20</p>	<p><i>ATTACHMENT TITLE</i> PERSONNEL SURVEY WORKSHEET</p>	<p><i>REVISION</i> 03</p>
<p><i>ATTACHMENT</i> 2</p>		<p><i>PAGE</i> 1 of 1</p>



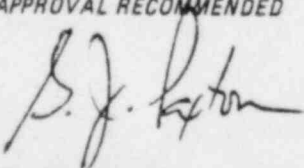
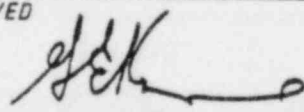
NUMBER EPIP-4.20	ATTACHMENT TITLE MAP TO MCV FROM I-95	REVISION 03
ATTACHMENT 3		PAGE 1 of 1



VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-4.22	PROCEDURE TITLE POST ACCIDENT SAMPLING OF CONTAINMENT AIR (With One Attachment)	REVISION 04
		PAGE 1 of 10

<p><i>PURPOSE</i></p> <p>1. To collect a post accident sample of containment air from Unit <u>1</u> OR Unit <u>2</u> Containment.</p>
<p><i>USER</i></p> <p style="text-align: center;">In-plant Monitoring Team.</p>
<p><i>ENTRY CONDITIONS</i></p> <p>1. Entry directed by Radiation Protection Supervisor.</p>
<h2 style="margin: 0;">SAFETY RELATED</h2>

<i>REVISION RECORD</i>		
REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 08-20-82
REV. 03	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 04	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
<i>APPROVAL RECOMMENDED</i> 	<i>APPROVED</i>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<i>DATE</i> 05-24-83

NUMBER EPIP-4.22	PROCEDURE TITLE POST ACCIDENT SAMPLING OF CONTAINMENT AIR	REVISION 04
		PAGE 2 of 10

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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NOTE

The Sentry High Radiation Sampling System will be the primary system used to perform the sampling of containment air, while the Interim system will be used as a backup. Combined time allotted for HRSS sampling and analysis should be three (3) hours or less from the time a decision is made to draw a sample.

- a) If operating the HRSS, proceed to O.P.12.4 for instructions in performing the sample.
- a) If operating the Interim system, proceed with this EPIP.

NUMBER EPIP-4.22	PROCEDURE TITLE POST ACCIDENT SAMPLING OF CONTAINMENT AIR	REVISION 04
		PAGE 3 of 10

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

CAUTION

This procedure can only be performed if the containment to be sampled is subatmospheric.

1. INITIATE EPIP-4.22:

a) BY: _____

DATE: _____

TIME: _____

NOTE: The RWP for drawing this sample should specify the following:

1. High and low range dosimetry,
2. Wrist, head, and ankle TLDs,
3. Full waterproof protective clothing,
4. Continuous H.P. monitoring using a 0-1000R/hr. meter, and
5. Self contained breathing apparatus.

2. VERIFY RWP:

a) RWP - ISSUED

a) IF NOT issued, initiate RWP.

<i>NUMBER</i> EPIP-4.22	<i>PROCEDURE TITLE</i> POST ACCIDENT SAMPLING OF CONTAINMENT AIR	<i>REVISION</i> 04
		<i>PAGE</i> 4 of 10

STEP**ACTION/EXPECTED RESPONSE****RESPONSE NOT OBTAINED**

3. OBTAIN REQUESTED EQUIPMENT:
 - a) Graduated syringe of at least 1 cc capacity with a 14 inch needle
 - b) 100 cc gas chamber
4. DESIGNATE SAMPLING PARTY:
 - a) 1 Operator

AND

 - b) 1 Monitoring Team Member
5. PREPLAN ROUTES:
 - a) Coordinate with Radiation Protection Supervisor
 - b) Check area survey maps to locate lowest dose fields for moving to and from sampling point
6. BRIEF SAMPLING PARTY:
 - a) Review this procedure
 - b) Review entry and exit routes
 - c) Review RWP requirements:
 - 1) Stay times,
 - 2) Protective requirements,
 - 3) Dosimetry,
 - 4) Respiratory equipment,
 - 5) Monitoring

<p>NUMBER EPIP-4.22</p>	<p>PROCEDURE TITLE POST ACCIDENT SAMPLING OF CONTAINMENT AIR</p>	<p>REVISION 04</p>
		<p>PAGE 5 of 10</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	<p>d) Review cautions:</p> <ul style="list-style-type: none"> 1) High radiation levels, 2) High activity samples, 3) Buddy system <p>e) Radiation Limits</p> <ul style="list-style-type: none"> 1) Evaluate with Radiological Assessment Director the need for Emergency Radiation Limits. 2) <u>If required, request initiation of EPIP 5.06 EMERGENCY RADIATION EXPOSURE AUTHORIZATION and EPIP. 4.04 EMERGENCY PERSONNEL EXPOSURE</u> 	<p>2) If not required continue with this procedure.</p>
7.	<p>VERIFY HYDROGEN ANALYZER:</p> <p>a) Hydrogen analyzer for unit to be sampled - LINED UP TO CONTAINMENT TO BE SAMPLED</p> <p style="text-align: center;"><u>AND</u></p> <p>PURGING</p>	<p>a) <u>IF NOT</u>, line up appropriate hydrogen analyzer to containment to be sampled</p> <p style="text-align: center;"><u>AND</u></p> <p>place in operation.</p>
8.	<p>DRESS OUT:</p> <p>a) Have sample party dress out IAW RWP</p>	
9.	<p>NOTIFICATION:</p> <p>a) Notify following that sample party being dispatched:</p> <ul style="list-style-type: none"> 1) Station Emergency Manager 2) Radiological Assessment Director 3) Shift Supervisor 	

<p>NUMBER EPIP-4.22</p>	<p>PROCEDURE TITLE POST ACCIDENT SAMPLING OF CONTAINMENT AIR</p>	<p>REVISION 04</p>
		<p>PAGE 6 of 10</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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10. DISPATCH SAMPLE PARTY:
- a) Give sample party a copy of this procedure

NOTE: The following steps are performed by the sampling party to draw a sample.

11. DETERMINE UNIT TO BE SAMPLED:
- a) IF Unit 1 to be sampled, GO TO next step
 - a) IF Unit 2 to be sampled GO TO Step 16.

NOTE: The following Steps 12 thru 15 are for sampling Unit 1.

12. LINE UP UNIT 1 FOR PURGE:
- a) Proceed to Hydrogen Analyzer H₂A-HC-100 and open panel
 - b) Ensure temporary sample bomb connected shut or
 - c) Check shut containment atmosphere sample valve 1-CAS-1
 - d) Open or check open valves V-7 and V-8
 - b) If not connected, return to Radiation Protection Supervisor,
 - 1) Obtain temporary sample bomb
 - 2) Connect sample bomb using quick disconnects

CAUTION

Initiation of purge flow will result in high activity containment gas flow through sample lines. Minimize stay time in the area of these lines.

<i>NUMBER</i> EPIP-4.22	<i>PROCEDURE TITLE</i> POST ACCIDENT SAMPLING OF CONTAINMENT AIR	<i>REVISION</i> 04
		<i>PAGE</i> 7 of 10

<i>STEP</i>	<i>ACTION/EXPECTED RESPONSE</i>	<i>RESPONSE NOT OBTAINED</i>
13.	PURGE SAMPLE LINES: a) Move to a low radiation area b) Wait approximately 15 minutes	
14.	LINE UP SAMPLE POINT: a) Shut valves V-7 and V-8 b) Open valve 1-CAS-1	
***** CAUTION The sample may read as high as 1 Rem/hr on contact. *****		
15.	DRAW SAMPLE: a) Fully insert needle through syringe cap on sample point b) Draw 1 cc sample c) Remove needle d) Close valve 1-CAS-1 e) <u>GO TO Step 20</u>	

<i>NUMBER</i> EPIP-4.22	<i>PROCEDURE TITLE</i> POST ACCIDENT SAMPLING OF CONTAINMENT AIR	<i>REVISION</i> 04
		<i>PAGE</i> 8 of 10

<i>STEP</i>	<i>ACTION/EXPECTED RESPONSE</i>	<i>RESPONSE NOT OBTAINED</i>
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NOTE: The following steps 16 thru 19 are for sampling Unit 2

16. LINE UP UNIT 2 FOR PURGE:

- a) Proceed to Hydrogen Analyzer H₂A-HC-200 and open panel.
 - b) Ensure temporary sample bomb connected shut or
 - c) Check shut containment atmosphere sample valve 2-CAS-1
 - d) Open valves V-7 AND V-8
- b) If not connected, return to Radiation Protection Supervisor,
 - 1) Obtain temporary sample bomb
 - 2) Connect sample bomb using quick disconnect

CAUTION

Initiation of purge flow will result in high activity containment gas flow through sample lines and bomb. Minimize stay time in the area of these lines.

17. PURGE SAMPLE LINES:

- a) Move to a low radiation area
- b) Wait approximately 15 minutes

18. LINE UP SAMPLE POINT:

- a) Shut valves V-7 and V-8
- b) Open valve 2-CAS-1

<p>NUMBER EPIP-4.22</p>	<p>PROCEDURE TITLE POST ACCIDENT SAMPLING OF CONTAINMENT AIR</p>	<p>REVISION 04</p>
		<p>PAGE 9 of 10</p>

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

CAUTION

The sample may read as high as 1 Rem/hr on contact.

19. DRAW SAMPLE:

- a) Fully insert needle through syringe cap on sample point
- b) Draw 1 cc sample
- c) Remove needle
- d) Shut valve 2-CAS-1

20. DILUTE SAMPLE:

- a) Inject 1 cc sample into 100 cc gas chamber

21. TRANSPORT SAMPLE:

- a) Place gas chamber in poly bag
- b) Hold bag away from body
- c) Transport to Chemistry Hot Lab using preplanned route

22. LABEL SAMPLE:

NOTE: Correct for volume of 1 cc gas sample by applying the following equation:

$$\text{Actual Vol.} = \text{INDICATED VOL.} \times \frac{\text{PSIA}}{14.7}$$

- a) Label gas chamber with following information:
 - 1) "Unit ___ containment gas,"
 - 2) "- cc gas sample,"

NUMBER EPIP-4.22	PROCEDURE TITLE POST ACCIDENT SAMPLING OF CONTAINMENT AIR	REVISION 04
		PAGE 10 of 10

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

22. (CONTINUED)

3) "1:100 dilution,"

4) Date, AND

5) Time drawn

23. SAMPLE DILUTION

a) If sample dilution required, initiate EPIP-4.26, High Level Activity Sample Analysis, upon termination of this procedure

a) If sample dilution not required prior to analysis, GO TO Step 24

24. NOTIFICATIONS:

a) Notify the following that sampling completed

1) Radiation Protection Supervisor

2) Shift Supervisor

3) Station Emergency Manager

25. TERMINATE EPIP-4.22:

a) COMPLETED BY: _____

TIME: _____

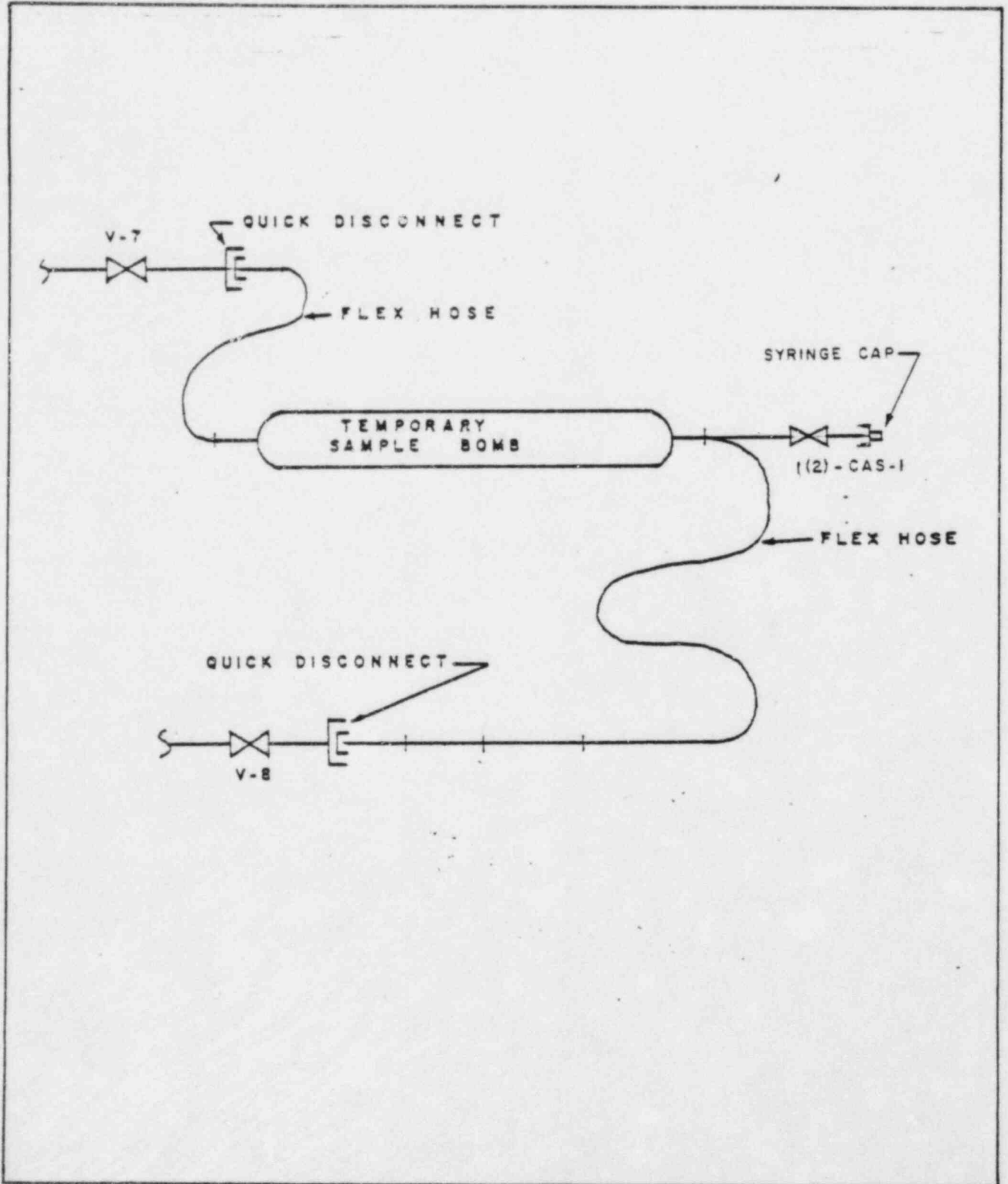
DATE: _____

26. FORWARD PROCEDURE:

a) Forward procedure to SNSOC for review

END

NUMBER EPIP-4.22	ATTACHMENT TITLE	REVISION 04
ATTACHMENT 1	INSIDE HYDROGEN ANALYZER CABINET	PAGE 1 of 1



VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER</p> <p>EPIP-4.23</p>	<p>PROCEDURE TITLE</p> <p>POST ACCIDENT SAMPLING OF REACTOR COOLANT (With 1 Attachment)</p>	<p>REVISION</p> <p>03</p> <p>PAGE</p> <p>1 of 14</p>
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PURPOSE

1. To collect a post accident sample of reactor coolant from Unit 1 OR Unit 2 Reactor Coolant Systems.

USER

Chemistry Team Leader AND Chemistry Team Member, and Inplant Monitoring Team.

ENTRY CONDITIONS

1. Entry directed by Radiation Protection Supervisor.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  <p>CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p>DATE</p> <p>05-24-83</p>
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<i>NUMBER</i> EPIP-4.23	<i>PROCEDURE TITLE</i> POST ACCIDENT SAMPLING OF REACTOR COOLANT	<i>REVISION</i> 03
		<i>PAGE</i> 2 of 14

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

NOTE

The Sentry High Radiation Sampling System will be the primary system used to perform the sampling of reactor coolant (Boron, pH, Dissolved Oxygen, Hydrogen, Diluted and Undiluted RCS, Diluted Stripped Gas), while the Interim system will be used as a backup. Combined time allotted for HRSS sampling and analysis should be three (3) hours or less from the time a decision is made to draw a sample.

a) If operating the HRSS, proceed to O.P.12.3 for instructions in performing the sample.

a) If operating the Interim system, proceed with this EPIP.

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 3 of 14

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE EPIP-4.23:

a) Initiated By: _____

Date: _____

Time: _____

NOTE: The RWP for drawing this sample should specify the following;

- 1) High and low range dosimetry,
- 2) Wrist, head, and ankle TLDs,
- 3) Full water proof protective clothing,
- 4) Continuous H.P. monitoring using 0-1000R /hr meter, and
- 5) Self contained breathing apparatus.

2. VERIFY RWP:

a) RWP - ISSUED

a) IF NOT issued, initiate RWP.

3. OBTAIN REQUIRED EQUIPMENT:

a) 15 ft of 3/4" Tygon tubing

b) 50 ft. 3/4" rope

c) 1 1/2" box end wrench

4. DESIGNATE SAMPLING PARTY:

a) 1 Monitoring Team Member

AND

b) 1 Chemistry Team Member

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 4 of 14

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

6. OBTAIN SAMPLE ROOM RAD LEVEL:
- a) RM-RMS-156, "Sample Area Monitor"
 - b) Radiation Limits
 - 1) Evaluate with Radiological Assessment Director the need for Emergency Radiation Limits
 - 2) If required, request initiation of EPIP-5.06 EMERGENCY RADIATION EXPOSURE AUTHORIZATION and EPIP-4.04 EMERGENCY PERSONNEL RADIATION EXPOSURE.
- 2) If not required continue with this procedure.
7. BRIEF SAMPLING PARTY:
- a) Review sampling procedure
 - b) Review entry and exit routes
 - c) Review RWP requirements
 - 1) Stay times
 - 2) Protective clothing
 - 3) Dosimetry
 - 4) Respiratory equipment
 - 5) Monitoring
 - d) Review cautions;
 - 1) High radiation levels
 - 2) High activity level sample
 - 3) High pressure sample
 - 4) High temperature sample

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 5 of 14

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
7.	(Continued)	
	5) Buddy system	
	6) Open valves slowly	
8.	DRESS OUT:	
	a) Have sample party dress out IAW RWP	
9.	NOTIFICATION:	
	a) Notify Station Emergency Manager that sample party being dispatched	
	b) Notify Shift Supervisor that sample party being dispatched	
10.	DISPATCH SAMPLE PARTY:	
	a) Give the sample party a copy of this procedure	
<u>NOTE:</u>	The following steps are performed by the sampling party to draw a sample. Refer to Attachment <u>1</u> for system arrangement.	
11.	PROCEED TO SAMPLE ROOM:	
	a) Monitor radiation levels	
	b) Follow preplanned routes	
	c) Leave rope at Aux. Bldg. entry door	
12.	LINE UP SYSTEM FOR SAMPLE:	
	a) Check following valves shut	
	_____ Valve "C" - SHUT	
	_____ Valve "D" - SHUT	
	_____ Valve "G" - SHUT	

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 6 of 14

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
12.	(CONTINUED) _____ Valve "H" - SHUT _____ Valve "K" - SHUT _____ Valve "L" - SHUT _____ Valve "M" - SHUT b) Check following valves open: _____ Valve "E" - OPEN _____ Valve "I" - OPEN _____ Valve "J" - OPEN _____ Valve "P" - OPEN	
13.	VERIFY NITROGEN BOTTLE PRESSURE: a) Shut Valve "Q" b) Adjust nitrogen pressure regulator PCV-GM-130 to <u>0</u> psig c) Open isolation valve on nitrogen bottle d) Verify nitrogen bottle pressure - <u>GREATER THAN 100 psig</u>	d) <u>IF NOT</u> , leave area <u>AND</u> initiate nitrogen bottle replacement, <u>AND</u> when replaced, resume procedure
14.	ADJUST NITROGEN REGULATOR: a) Slowly adjust nitrogen pressure regulator PCV-GM-130 to <u>10</u> psig b) Open Valve "Q"	

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 7 of 14

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
15.	VERIFY SAMPLE COLLECTION CYLINDER CONNECTED: a) Cylinder - IN SHIELDED "PIG" b) Quick disconnect - CONNECTED c) Vent Valve "M" - SHUT	a) <u>IF NOT</u> , place in "pig". b) <u>IF NOT</u> , connect quick disconnect. c) <u>IF NOT</u> , shut valve "M".
16.	CONNECT TYGON TUBING: a) Connect Tygon tubing to drain pipe on Holding Tank, TK-1, at discharge of valve "F"	
17.	VENT AND DRAIN HOLDING TK.: a) Open following valves ___ Valve "F" - OPEN ___ Valve "N" - OPEN	
18.	VERIFY HOLDING TK. DRAINED: a) No flow through tygon tubing	a) <u>IF</u> flow, wait until flow stops.
19.	ISOLATE HOLDING TK.: a) Shut following valves: ___ Valve "N" - SHUT ___ Valve "F" - SHUT	

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 8 of 14

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

20. DETERMINE PROCEDURE STEPS TO FOLLOW:

a) IF Unit 1 to be sampled;
GO TO step 21

a) IF Unit 2 to be sampled,
GO TO Step 28

NOTE: The following Steps 21 thru 27 are for sampling Unit 1.

21. ISOLATE SAMPLE SINK:

a) Shut Valve "A"

22. HAVE CONTAINMENT ISOLATION RESET:

a) Have Control Room reset Unit 1
Phase "A" Isolation, Trains
"A" AND "B"

23. HAVE SAMPLE TRIP VALVES OPENED:

a) Have Control Room open TV-
SS-106A

AND

open TV-SS-106B

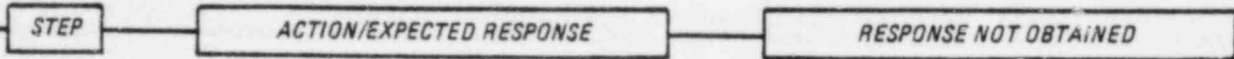
24. OPEN UNIT 1 SAMPLE LINE TRIP VALVE:

a) From Sample Room, open TV-
SS-108D

<p>NUMBER EPIP-4.23</p>	<p>PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT</p>	<p>REVISION 03</p>
		<p>PAGE 9 of 14</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>*****</p>		
<p><u>CAUTION:</u> Flow of high activity reactor coolant will commence when next step is performed.</p>		
<p>*****</p>		
25.	PURGE SAMPLE LINE:	
	a) Observe sample line pressure gage PI-SS-126	
	b) Throttle open 1/4 to 1/2 turn valve "C"	
	c) When pressure indicates <u>20</u> psig, shut valve "C"	
26.	ISOLATE PURGE PATH:	
	a) Shut valve "E"	
27.	COLLECT CALIBRATED SAMPLE:	
	a) Observe sample pressure gage PI-SS-126	
	b) Throttle open 1/4 to 1/2 turn valve "C"	
	c) When pressure indicates <u>100</u> psig, shut valve "C"	
	d) <u>GO TO</u> Step <u>35</u>	
<p><u>NOTE:</u> The following Steps <u>28</u> thru <u>35</u> are for sampling Unit <u>2</u>.</p>		
28.	ISOLATE SAMPLE SINK:	
	a) Shut Valve "B"	

<p>NUMBER EPIP-4.23</p>	<p>PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT</p>	<p>REVISION 03</p>
		<p>PAGE 10 of 14</p>



29. HAVE CONTAINMENT ISOLATION RESET:

a) Have Control Room reset
Unit 2 Phase "A" Isolation,
Trains "A" AND "B"

30. HAVE SAMPLE TRIP VALVES OPENED:

a) Have Control Room open
TV-SS-206A

AND

open TV-SS-206B

31. OPEN UNIT 2 SAMPLE LINE TRIP VALVE:

a) From Sample Room, open
TV-SS-208D

CAUTION: Flow of high activity reactor coolant will commence when next step is performed.

32. PURGE SAMPLE LINE:

a) Observe sample line pressure gage PI-SS-126

b) Throttle open 1/4 to 1/2 turn Valve "D"

c) When pressure indicates 20 psig, shut Valve "D"

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 11 of 14

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
33.	ISOLATE PURGE PATH:	
	a) Shut Valve "E"	
34.	COLLECT CALIBRATED SAMPLE:	
	a) Observe sample pressure gage PI-SS-126	
	b) Throttle open 1/4 to 1/2 turn Valve "D"	
	c) When pressure indicates <u>100</u> psig, shut Valve "D"	
35.	ISOLATE CALIBRATED SAMPLE:	
	a) Shut Valve "I"	
	b) Shut Valve "J"	
36.	SHUT TRIP VALVE:	
	a) <u>IF</u> sampling Unit <u>1</u> , shut TV-SS-108D	a) <u>IF</u> sampling Unit <u>2</u> shut TV-SS-208D.
37.	LINE UP SAMPLE TO SAMPLE CYLINDER	
	a) Open Valve "L"	
	b) Open Valve "K"	
38.	VERIFY NITROGEN PRESSURE:	
	a) Regulator discharge pressure - <u>10</u> psig	a) <u>IF NOT</u> , adjust nitrogen regulator PCV-GM-130 to <u>10</u> psig.
39.	TRANSFER AND DILUTE SAMPLE:	
	a) Open Valve "G"	

NUMBER EPIP-4.23	PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT	REVISION 03
		PAGE 12 of 14

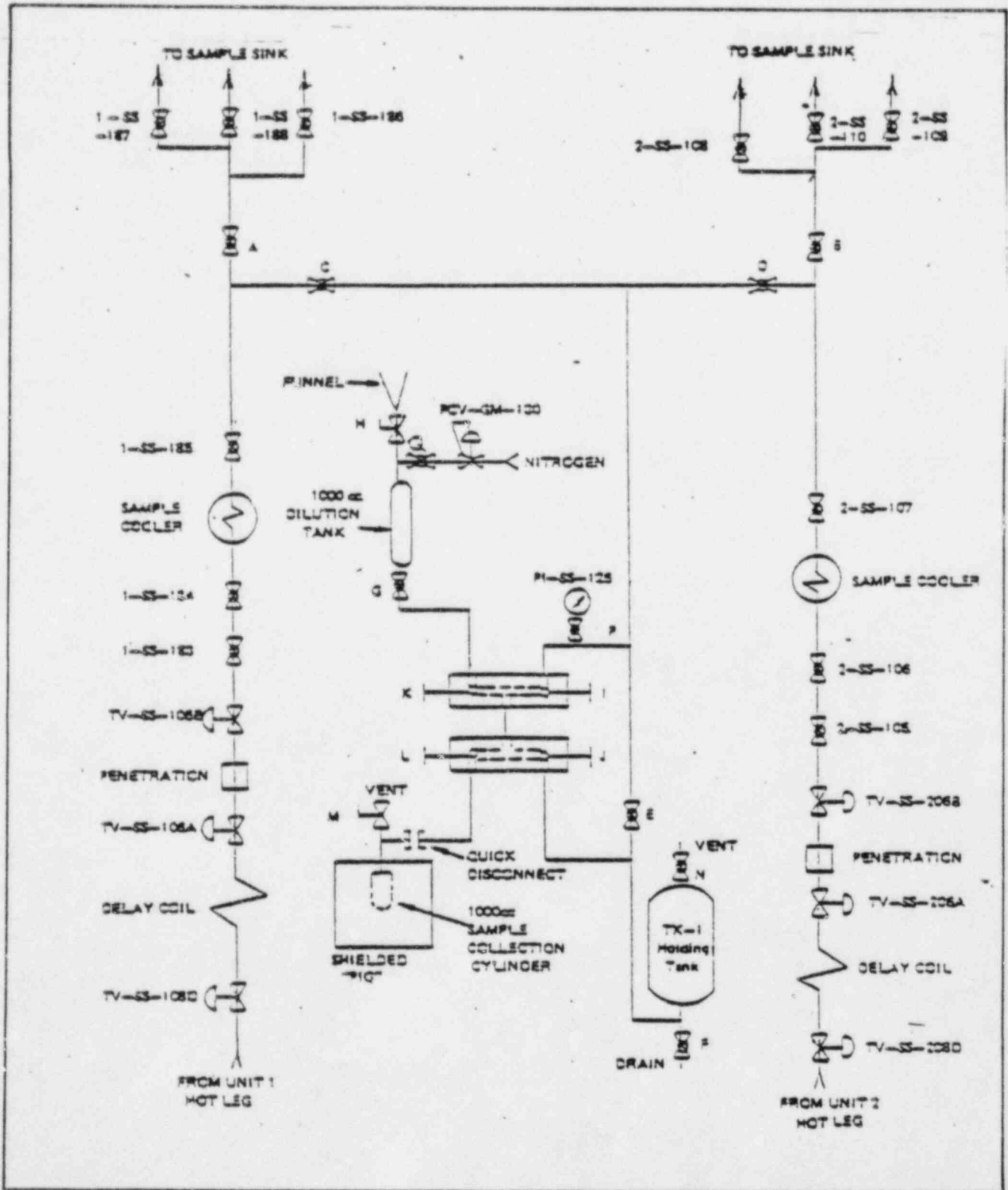
STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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40. COLLECT SAMPLE:
- a) Leave Valve "G" open for approx. 4 minutes
 - b) Shut Valve "G"
41. ISOLATE SAMPLE CYLINDER:
- a) Shut Valve "K"
 - b) Shut Valve "L"
42. DISCONNECT SAMPLE CYLINDER:
- a) Use 1 1/4" box end wrench
 - b) Disconnect quick disconnect
 - c) Lower lid onto sample "pig"
43. SURVEY SAMPLE PIG:
- a) Survey sample "pig" to determine rad levels and hot spot locations
44. TRANSPORT PIG:
- a) Unlock wheel brakes
 - b) Use preplanned exit route
 - c) Avoid hot spots on pig
 - d) Roll sample pig to Aux. Bldg. exit door

<p>NUMBER EPIP-4.23</p>	<p>PROCEDURE TITLE POST ACCIDENT SAMPLING OF REACTOR COOLANT</p>	<p>REVISION 03 PAGE 13 of 14</p>
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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
<p>*****</p>		
<p><u>CAUTION:</u> The sample pig is extremely heavy and may present a hazard if allowed to roll down the ramp unrestrained. Use caution in lowering</p>		
<p>*****</p>		
45.	LOWER PIG DOWN RAMP:	
	<ul style="list-style-type: none"> a) Obtain padeye from locker next to exit door b) Screw padeye into pad in floor c) Rig rope thru padeye to sample pig d) Carefully lower sample pig down ramp 	
46.	TRANSPORT PIG TO HOT LAB:	
	<ul style="list-style-type: none"> a) Roll pig to Chemistry Hot Lab 	
47.	HAVE SAMPLE TRIP VALVES SHUT:	
	<ul style="list-style-type: none"> a) Notify Shift Supervisor that sampling completed b) <u>IF</u> sampling Unit 1, have Control Room shut TV-SS-106B <u>AND</u> TV-SS-106B 	<ul style="list-style-type: none"> a) <u>IF</u> sampling Unit 1, have Control Room shut TV-SS-206A <u>AND</u> TV-206B.
48.	NOTIFICATIONS	
	<ul style="list-style-type: none"> a) Notify following that sampling completed <ul style="list-style-type: none"> 1) Chemistry Team Leader 	

NUMBER	ATTACHMENT TITLE	REVISION
EPIP-4.23	SHORT TERM POST ACCIDENT SAMPLE SYSTEM	03
ATTACHMENT		PAGE
1		1 of 1



VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER EPIP-5.03	PROCEDURE TITLE PERSONNEL ACCOUNTABILITY (With 2 Attachments)	REVISION 03 <hr/> PAGE 1 of 6
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PURPOSE

1. To determine the personnel who are inside the protected area and unaccounted for within 30 minutes following declaration of Alert, Site Emergency, or General Emergency.
2. To provide a periodically updated list of all personnel inside the protected area.

USER

Security Team Leader

ENTRY CONDITIONS

Any one of the following:

1. Activation by another EPIP.

OR

2. Declaration of an Alert, Site Emergency, or General Emergency.

OR

3. Any time deemed necessary by the Station Emergency Manager.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p style="text-align: center; margin: 0;">APPROVAL RECOMMENDED</p>	<p style="text-align: center; margin: 0;">APPROVED</p> <p style="text-align: center; margin: 5px 0;">CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE</p>	<p style="text-align: center; margin: 0;">DATE</p> <p style="text-align: center; margin: 10px 0;">05-24-83</p>
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NUMBER EPIP-5.03	PROCEDURE TITLE PERSONNEL ACCOUNTABILITY	REVISION 03
		PAGE 2 of 6

STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE EPIP-5.03:

a) Initiated By: _____

Time: _____

Date: _____

2. VERIFY EVACUATION STATUS

a) Evacuation - NOT ORDERED

a) IF evacuation ordered, GO TO
Step 10.

NOTE: Each Emergency Assembly Area will have an Emergency Assembly Area Leader. This person will be a supervisor or other cognizant person normally working in the Emergency Assembly Area.

Each Assembly Area Leader should take immediate steps to identify who is present in that area. Stored in the envelope with EPIP 5.03 will be a list of personnel who should report to that particular Assembly Area. A check mark should be placed next to each person on the list who is physically there. If any person is there that is not on the list for that area the Badge Number and Name should be listed separately. Results are to be reported, as soon as possible, to Security at Extension 2225 or 2227.

3. INITIATE ACCOUNTABILITY
WITHOUT EVACUATION:a) Make announcement on plant
Gai-Tronics system as follows:

1) "Attention all personnel -
Attention all personnel,
report to your designated
Assembly Area for account-
ability.

2) "Emergency Assembly Area
Leaders - Take account-
ability and report the
results to extension 2225
or 2227".

<p>NUMBER</p> <p>EFIP-5.03</p>	<p>PROCEDURE TITLE</p> <p>PERSONNEL ACCOUNTABILITY</p>	<p>REVISION</p> <p>03</p>
		<p>PAGE</p> <p>3 of 6</p>

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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3. (CONTINUED)
- b) Repeat Step 3.a, THEN continue this instruction
4. CALL PSC
- a) Use station PBX
- b) Dial 82-3004 or 82-3014
- c) Instruct them to perform accountability
- d) Instruct them to report results to extensions 2225 or 2227
5. RECORD RESULTS:
- a) As accountability results come in, record on Attachment 1, Personnel Accountability Form
- b) Assembly Areas and Personnel normally reporting there are listed on Attachment 2.
6. PERFORM BADGE ACCOUNTABILITY
- a) Determine personnel in the Protected Area by performing a Manual Search of the Badge Rack.
7. BALANCE RESULTS
- a) Compare the list of personnel in Step 5 to the list of personnel to Step 6 to determine who is in the Protected Area that has not been accounted for.

NUMBER EPIP-5.03	PROCEDURE TITLE PERSONNEL ACCOUNTABILITY	REVISION 03 PAGE 4 of 6
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

8. FORWARD LIST:

- a) Forward list of Personnel within the Protected Area, highlighting the names of those missing, to the Emergency Administrative Director in TSC
- b) Forward list of Personnel missing outside of the Protected Area to the Emergency Administrative Director in TSC.
- c) GO TO Step 16

9. INITIATE ACCOUNTABILITY WITH EVACUATION:

- a) As personnel are evacuating collect their security badges
- b) Remind evacuating personnel to keep their pocket dosimeters and TLD's
- c) Concurrent with evacuation, process security badges

AND

return them to badge rack

NUMBER EPIP-5.03	PROCEDURE TITLE PERSONNEL ACCOUNTABILITY	REVISION 03
		PAGE 5 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
10.	INPLANT ANNOUNCEMENT: a) Make announcement on plant Gai-Tronics system as follows: 1) "Emergency response center heads perform accountability and report the results to Extension 2225 or 2227". b) Repeat Step <u>11.a</u> , <u>THEN</u> continue this instruction	
11.	PERFORM BADGE ACCOUNTABILITY: a) Verify security badges b) Obtain the names of all personnel <u>within the Protected Area</u> by performing a Manual Search of Badge Rack.	a) <u>IF NOT</u> , process badges.
12.	RECORD NAMES: a) When emergency response center heads report back, record all personnel accounted for on Attachment 1.	
13.	BALANCE LIST: a) Compare the list(s) from Step <u>12</u> with the list from Step <u>11</u> and <u>highlight names of all personnel within the Protected Area missing</u> .	

NUMBER EPIP-5.03	PROCEDURE TITLE PERSONNEL ACCOUNTABILITY	REVISION 03
		PAGE 6 of 6

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
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14. FORWARD LIST:

- a) Forward list of all personnel within the Protected Area, highlighting the names of those missing, to Emergency Administrative Director in TSC

15. RUN COMPUTER LISTING:

- a) Produce a computer list of all personnel within the Protected Area every hour.

- a) IF computer is down do log in and out of all personnel.

OR

as directed by Emergency Administrative Director

- b) Forward list to Emergency Administrative Director in TSC

16. VERIFY EMERGENCY STATUS:

- a) Emergency - NOT TERMINATED
 b) GO TO Step 16

- a) IF terminated, GO TO Step 18

17. TERMINATE EPIP-5.03:

- a) BY: _____
 TIME: _____
 DATE: _____
- b) Forward EPIP-5.03 with all attachments to SNSOC for review

END

NUMBER EPIP-5.03	ATTACHMENT TITLE INDIVIDUAL ASSEMBLY AREA	REVISION 03
ATTACHMENT 1		PAGE 1 of 1

Assembly Area _____

Date _____

Time _____

1. Who is there that should be: (BADGE # Only)

2. Who is there that should not be: (BADGE # AND NAME)

COMMENTS: (If any)

<p>NUMBER EPIP-5.03</p>	<p>ATTACHMENT TITLE PERSONNEL ACCOUNTABILITY</p>	<p>REVISION 03</p>
<p>ATTACHMENT 2</p>		<p>PAGE 1 of 3</p>

ASSEMBLY AREA

1st FLOOR ADMINISTRATION
BLDG. - LOBBY

Station Management
Front Office Admin-
istrative

2nd FLOOR ADMINISTRATION
BLDG. - ENGINEERING OFFICE

Planning,
Engineering,
Instrument Cal Lab,
NRC

INSTRUMENT SHOP

Instrument Dept.

HEALTH PHYSICS

H.P. Dept.

CHEMISTRY

Chemistry Dept.

ELECTRICAL SHOP

Electricians,
Storerroom Personnel

NUMBER EPIP-5.03	ATTACHMENT TITLE PERSONNEL ACCOUNTABILITY	REVISION 03
ATTACHMENT 2		PAGE 2 of 3

ASSEMBLY AREA

CONTROL ROOM

Operations Dept.

MACHINE SHOP

Mechanical Main-
 tenance,
 Maintenance Services,
 Laborers

SECURITY

Security Dept.,
 Visitors,
 VEPCO Non Station
 Employees
 (2000 series and
 3000 series)

ENVIRONMENTAL LAB

Environmental Dept.

TRAINING AUDITORIUM

Training Dept.,
 Students.

NUMBER EPIP-5.03	ATTACHMENT TITLE PERSONNEL ACCOUNTABILITY FORM	REVISION 03
ATTACHMENT 2		PAGE 3 of 3

ASSEMBLY AREA

WAREHOUSE

Warehouse Personnel,
Dose Control,
Medical Dept.,
Whole Body Count

1st FLOOR RECORDS BLDG.

Station Records
Personnel,
Q.C.

VISITOR CENTER

Visitor Center Person-
nel,
Visitors

PROJECTS SIDE

VIRGINIA ELECTRIC AND POWER COMPANY
 NORTH ANNA POWER STATION
 EMERGENCY PLAN IMPLEMENTING PROCEDURE

<p>NUMBER EPIP-5.05</p>	<p>PROCEDURE TITLE SITE EVACUATION (With No Attachments)</p>	<p>REVISION 03 PAGE 1 of 5</p>
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PURPOSE
 Insure steps are taken to provide for a quick and orderly evacuation.

USER
 Station Emergency Manager OR Emergency Administrative Director

ENTRY CONDITIONS
 Any one of the following conditions exist:

1. Activation by another EPIP.

OR

2. Upon determining evacuation is imminent.

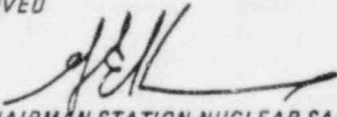
OR

3. At any time deemed necessary by the Station Emergency Manager.

SAFETY RELATED

REVISION RECORD

REV. 00	PAGE(S): Entire Procedure	DATE: 07-02-82
REV. 01	PAGE(S): Entire Procedure	DATE: 07-22-82
REV. 02	PAGE(S): Entire Procedure	DATE: 09-01-82
REV. 03	PAGE(S): Entire Procedure	DATE: 05-24-83
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:
REV.	PAGE(S):	DATE:

<p>APPROVAL RECOMMENDED</p> 	<p>APPROVED</p>  CHAIRMAN STATION NUCLEAR SAFETY AND OPERATING COMMITTEE	<p>DATE 05-24-83</p>
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NUMBER EPIP-5.05	PROCEDURE TITLE SITE EVACUATION	REVISION 03
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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. INITIATE EPIP-5.05:

- a) Initiated By: _____
 TIME: _____
 DATE: _____

2. DETERMINE WIND DIRECTION

- a) Obtain from status board a) Obtain from Control Room
 b) Record wind direction

3. DETERMINE APPROPRIATE
REMOTE ASSEMBLY AREA:

- a) IF wind direction NOT from N, NNE, NE, OR ENE, use the Primary Remote Assembly Area a) IF wind direction IS from N, NNE, NE, OR ENE, use the Secondary Remote Assembly Area
 b) Obtain the key for the Primary Remote Assembly Area from the Radiation Protection Supervisor in Health Physics at PBX ext. 2601 PRIOR to departure or from the Control Room b) Contact the on-shift Reservoir Operator at the North Anna Dam at PBX extension 2903 OR use commercial phone at (703) 872-3531 and have him open the gate on the Louisa side to receive Site evacuees

4. REQUEST ROAD BLOCK:

- a) Call Louisa Co. Sheriffs Dept. on station PBX OR commercial telephone, at 9-967-1234 a) IF NOT operable, use tone-activated security radio
 b) Request they dispatch one sheriff's unit to establish traffic control at intersection of Rt. 700 and Rt. 652

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4.	(CONTINUED)	
	c) <u>IF</u> Primary Remote Assembly Area is to be used, request traffic be directed through intersection and down RT 700 to RT 618	a) <u>IF</u> Secondary Remote Assembly Area is to be used, request they direct traffic left onto Rt. 652
5.	NOTIFY SECURITY:	
	a) Notify Security Team Leader that evacuation order will be issued	
	b) Inform Security Team Leader whether Primary <u>OR</u> Secondary Remote Assembly Area is to be used	
	c) Verify EPIP-5.04, <u>Access Control</u> - ACTIVATED	c) <u>IF NOT</u> , direct Security Team Leader to initiate EPIP-5.04
6.	NOTIFY PSC:	
	a) Call PSC on station PBX at 82-3014 or 82-3004	
	b) Direct them to order an evacuation of MPP personnel to the appropriate Remote Assembly Area, as determined by Step 3.	
7.	NOTIFY SECURITY POST 1:	
	a) Call Post 1 on station PBX at 82-3251	
	b) Direct them to order an evacuation of personnel to the appropriate Remote Assembly Area, as determined by Step 3.	

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
8. SOUND EVACUATION ALARM: a) <u>IF</u> in TSC, call Control Room and direct them to sound Evacuation Alarm for <u>10</u> seconds		a) <u>IF</u> in Control Room, direct Operator to sound Evacuation Alarm for <u>10</u> seconds
9. MAKE ANNOUNCEMENT: a) <u>IF</u> the Primary Remote Assembly area is used, make following announcement on Gai-Tronics: "All personnel <u>NOT</u> responding to the emergency, evacuate the station" "Turn in your security badge as you evacuate" "Keep your pocket dosimeter and TLD" "Proceed in your vehicle down Rt. 700 to Rt. 618" "Turn left on Rt. 618 and proceed to approximately 0.8 mile to the Primary Remote Assembly Area "Remain in your vehicles and await further instructions"		a) <u>IF</u> Secondary Remote Assembly Area is to be used, make following announcement on Gai-Tronics: "All personnel <u>NOT</u> responding to the emergency, evacuate the station" "Turn in your security badge as you evacuate" "Keep your pocket dosimeter and TLD" "Proceed in your vehicle down Rt. 700 to Rt. 652" "Turn left on Rt. 652 and proceed to Rt. 622" "Turn left on Rt. 622 and proceed to Rt. 701" "Turn left on Rt. 701 and proceed to Rt. 601" "Turn left on Rt. 601 and proceed to approximately 0.1 mile The secondary Remote Assembly Area will be on your left, through the gate

