

**DOMINION GENERATION  
NORTH ANNA POWER STATION  
DECEMBER 5, 2000 EMERGENCY EXERCISE**

**TIME LINE**

<b>TIME</b>	<b>EVENT DESCRIPTION</b>	<b>ANTICIPATED RESPONSE</b>
0700	Facilitator exercise day briefing.	Final prep for exercise. Lead Facilitator ensures all changes issued and questions addressed.
0745	Simulator Briefing.	CRS Lead Facilitator briefs the operations shift on the initial conditions and simulator set up.
0830	Start drill.	Simulator placed in run. Lead Facilitator indicates over facilitator network to begin exercise play.
0836	Minor earthquake occurs (mini-scenario #1, Minor Earthquake #1).	Operators enter 0-AP-36, Seismic Event. The SS (Interim SEM) enters EPIP-1.01 and declares a NOUE per Tab L-8, due to detecting an earthquake (allow time for the operators to determine conditions and then 15 minutes for assessment and classification) and notifies state & local governments (EPIP-2.01) and NRC (EPIP-2.02, control cell). Also, the SS may request plant walkdowns. The SS will request I&C perform 1-PT-39.7, "Seismic Instrumentation After A Seismic Event."
0838	First aid emergency reported to the Simulator Control Room (mini-scenario #2, Medical Emergency).	CRS informed of medical emergency and operators enter 0-AP-51, Personnel Injury - Operations Response. Gai-Tronics announcement for First Aid Team to respond. First Aid Team responds to scene, renders first aid and packages victim for transport to an off-site medical facility.
0845	Loose parts alarm comes in and clears (mini-scenario #3, Loose Parts). RCS activity starts to increase.	Operators / STA identify the loose part in the vessel lower head, but it clears and no noise can be heard.
0856	1-CH-RI-128, Letdown Radiation Monitor, exceeds the Hi alarm setpoint.	Initiate 1-AP-5 to verify the radiation monitor alarm. Interim SEM reviews EPIP-1.01 EALs for possible classification upgrade and determines it is a NOUE per Tab C-11 in 15 minutes (don't expect this to be declared, only identified).
0859	1-CH-RI-128, Letdown Radiation Monitor, exceeds Hi-Hi alarm setpoint.	The Interim SEM continues to review EPIP-1.01 EALs for possible classification upgrade. Conditions for an Alert classification per Tab C-8 will be met in 15 minutes.

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0914	Conditions for an Alert satisfied.	Using EPIP-1.01, the Interim SEM declares an Alert per Tab C-8, due to possible severe fuel clad damage (allow time for the operators to determine conditions and then 15 minutes for assessment and classification). Callout the emergency response organization (EPIP-3.05), notify state & local governments (EPIP-2.01) and NRC (EPIP-2.02, control cell). Activate facilities, and perform accountability.
1036	Minor earthquake occurs (mini-scenario #4, Minor Earthquake #2). The main feed pumps loose suction (mini-scenarios #5, Main Feed Pump Low Suction Pressure Trip).	Operators enter 0-AP-36, Seismic Event. The SEM continues to review EPIP-1.01 EALs for possible classification upgrade. The SS may request plant walkdowns. The SS will request I&C perform 1-PT-39.7, "Seismic Instrumentation After A Seismic Event."
1037	Reactor and turbine manually tripped.	Operators enter 1-E-0.
1038	A major break LOCA occurs. Safety injection initiates, letdown isolates, the containment pressurizes and CDA initiates. The "1H" Emergency Diesel Generator fails to start (mini-scenario #6, 1-EE-EG-1H Start Failure). Charging pump 1-CH-P-1B coupling shears (mini-scenario #7, 1-CH-P-1B Coupling Failure).	Operators identify the LOCA, re-enter 1-E-0 and inform the TSC. SEM reviews EALs and declares a Site Area Emergency per Tab B-3, due to exceeding makeup capacity (allow time for the operators to determine conditions and then 15 minutes for assessment and classification). Notify state, locals (EPIP-2.01) and NRC (EPIP-2.02, control cell). As required, HP performs surveys in-plant, on-site and off-site. SS informs TSC of the equipment failures. Anticipate TSC to prioritize as damage control evolutions. DC Teams to conduct investigation, assessment and repairs.
1130	Safety injection swaps to recirculation mode.	Operators continue monitoring plant conditions.
1139	1-SI-P-1B trips (mini-scenario #8, 1-SI-P-1B Overcurrent Trip). A weld joint between 1-SI-MOV-1864B and 10"-SI-141-153A-Q2 cracks (mini-scenario #9, 10"-SI-141-153A-Q2 Pipe Failure) resulting in a leak into safeguards. A radiological release occurs to the environment through the ventilation system. If attempts are made to close 1-SI-MOV-1864A, the breaker trips on overcurrent (mini-scenario #10, 1-	Operators assess plant conditions and inform the TSC. Using EPIP-1.01, the SEM declares a General Emergency per Tab B-1, loss of the fission product barriers (allow time for the operators to determine conditions and then 15 minutes for assessment and classification). Develop PAR (EPIP-1.06) and Notify state, locals (EPIP-2.01) and NRC (EPIP-2.02). Track plume (EPIP-4.15, 4.16), perform dose assessment (EPIP-4.03). The stability class is F. The affected sectors are MNP. The wind

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1139 (cont)	<b>SI-MOV-1864A Breaker Trip).</b> If attempts are made to stop the leak by shifting to the outside recirculation spray system, neither 1-RS-146 nor 1-RS-147 can not be opened (mini-scenario #11, 1-RS-146 Fails Shut).	direction is from the E (90°). TSC to assign task to conduct investigation, assessment and attempt stopping the leak into safeguards, repair 1-SI-P-1B or close 1-SI-MOV-1864A. As required, HP will perform surveys inplant, onsite and off-site.
1247	1-SI-P-1B returned to service.	Operators start 1-SI-P-1B and align discharge to inject through the RCS hot leg. Release path isolated.
1300	Terminate the exercise and prepare for debriefing.	ERO to return ERFs to state of readiness in accordance with procedures. Exercise paperwork collected and given to the Lead Facilitators.
1315	Conduct Participants post-exercise debrief	Participants critique their performance and Facilitators brief participants on observations.

**Summary:**

- A minor earthquake occurs which is a NOUE per Tab L-8.
- A medical emergency occurs. The victim is contaminated and requires victim be transport to an off-site medical facility.
- A loose part causes fuel clad damage and subsequent elevated reactor coolant system activity. Alert conditions per Tab C-8 are established.
- A major break LOCA occurs and conditions are established to meet the Site Area Emergency requirements per Tab B-3.
- A safety injection line breaks during the swap from normal safety injection to the recirculation mode resulting in a radiological release to the environment. Conditions are now established for a General Emergency per Tab B-1.
- Multiple equipment failures occur to establish damage control evolutions for the TSC to prioritize and teams to respond to.