



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
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Report Nos.: 50-424/95-02 and 50-425/95-02

Licensee: Georgia Power Company
P. O. Box 1295
Birmingham, AL 35201

Docket Nos.: 50-424 and 50-425

License Nos.: NPF-68 and NPF-81

Facility Name: Alvin W. Vogtle Nuclear Plant Units 1 and 2

Inspection Conducted: January 9-13, 1995

Inspector:

James L. Kreh
for W. M. Sartor, Jr.

2-23-95
Date Signed

Accompanying Personnel: P. Hopkins, Resident Inspector
J. Kreh, RII
A. Gooden, RII

Approved by:

K. P. Barr
K. P. Barr, Chief

Feb 24, 1995
Date Signed

Emergency Preparedness Section
Radiological Protection and Emergency Preparedness Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection involved the observation and evaluation of the annual emergency preparedness exercise. This NRC/FEMA evaluated exercise was originally scheduled during July 1994, but was rescheduled to January 11, 1995, at the request of the Georgia Emergency Management Agency. The scope of the onsite inspection focused on the adequacy of the licensee's emergency response program, the implementation of the Emergency Plan and procedures, and the training program for emergency response personnel.

Results:

In the areas inspected, violations or deviations were not identified. The exercise was fully satisfactory. Exercise strengths included the licensee's timely staffing of emergency response facilities, emergency classifications and notifications, accident mitigation, and the critique process.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *J. Beasley, General Manager
- *S. Chesnut, Technical Support Manager
- *R. Dorman, Manager, Training and Emergency Preparedness
- *C. Eckert, Technical Specialist
- *G. Frederick, Manager, Maintenance
- *W. Gabbard, Nuclear Specialist
- *J. Gasser, Manager, Operations
- *M. Griffis, Manager, Modifications
- *T. Hargis, Maintenance Superintendent
- *W. Hays, Emergency Communications Supervisor
- *J. Huyck, Manager, Nuclear Security
- *W. Kitchens, Assistant General Manager
- *R. LeGrand, Manager, HP/Chemistry
- *N. Maddox, Emergency Preparedness Coordinator
- *L. Mayo, Nuclear Specialist
- *G. McCarley, ISEG Supervisor
- *T. Mozingo, Site Representative, Oglethorpe Power
- *J. Roberts, Emergency Preparedness Coordinator
- *C. Stinespring, Manager, Plant Administration
- *J. Swartzwelder, Manager, Outage and Planning

Other licensee employees contacted during this inspection included craftsmen, engineers, operators, mechanics, security force members, technicians, and administrative personnel.

Nuclear Regulatory Commission

- *P. Hopkins, Resident Inspector
- *B. Bonser, Senior Resident Inspector
- *M. Widmann, Resident Inspector

*Attended exit interview

Abbreviations used throughout this report are listed in the last paragraph.

2. Exercise Scenario (82302)

The scenario for the emergency exercise was reviewed to determine whether provisions had been made to test the integrated emergency response capability and a major portion of the basic elements within the licensee's Emergency Plan, as required by 10 CFR 50.47(b)(14) and Section IV.F of Appendix E to 10 CFR Part 50.

The scenario was reviewed in advance of the exercise and was discussed with licensee representatives prior to the exercise. The scenario developed for this exercise was adequate to fully demonstrate the

capabilities of the onsite and offsite emergency organizations of the licensee and provided sufficient emergency information to the State and local government agencies for their full participation in the exercise.

3. Onsite Emergency Organization (82301)

The licensee's organization was observed during the exercise to determine whether the requirements of Paragraph IV.A of Appendix E to 10 CFR Part 50 (as addressed in the Emergency Plan) were implemented with respect to descriptions, responsibilities, and assignment of the onsite emergency response organization.

The inspectors observed that specific emergency assignments had been made for the licensee's emergency response organization and there were adequate staffs available to respond to the simulated emergency. The initial response organization was augmented by designated licensee representatives, and the capability for long-term or continuous staffing of the emergency response organization was demonstrated. The inspector in the EOF observed good coordination between the emergency response facilities during the transfer of Emergency Director responsibilities from the on-call ED to the TSC Manager and the EOF Manager.

No violations or deviations were identified.

4. Emergency Response Support and Resources (82301)

This area was observed to determine whether arrangements for requesting and effectively using assistance resources were made, whether arrangements to accommodate State and local personnel in the EOF were adequate, and whether other organizations capable of augmenting the planned response were identified as specified by 10 CFR 50.47(b)(3), Paragraph IV.A of Appendix E to 10 CFR Part 50, and guidance promulgated in Section II.C of NUREG-0654 (Revision 1).

The licensee's Emergency Plan provided for additional support and resources that may be called upon to assist in an emergency. Representatives of the States of Georgia and South Carolina, as well as the Savannah River Site, were accommodated at the near-site EOF.

No violations or deviations were identified.

5. Emergency Classification System (82301)

This area was observed to verify that a standard emergency classification and action level scheme was in use by the licensee as required by 10 CFR 50.47(b)(4) and Paragraph IV.C of Appendix E to 10 CFR Part 50, and to determine whether that scheme was adequately implemented.

An inspector observed that the emergency classification system was in effect as stated in the Vogtle Emergency Plan and in the Implementing Procedures. The system was adequate for the classification of the simulated accident and the emergency procedures were used by the Simulator Control Room shift for initial and continuing mitigating actions during the simulated emergency.

No violations or deviations were identified.

6. Notification Methods and Procedures (82301)

This area was observed to determine whether procedures had been established for notification by the licensee of State and local response organizations and emergency personnel, and the content of initial and follow-up messages to response organizations had been established; and a means to provide early notification to the population within the plume exposure pathway had been established as required by 10 CFR 50.47(b)(5), 10 CFR 50, Appendix E, Paragraph IV.D, and the specific criteria in NUREG-0654, Section II.E.

The inspector observed that notification methods and procedures had been established and were used to provide information concerning the simulated emergency conditions to Federal, State and local response organizations and to alert the licensee's augmented emergency response organizations. Due to the time constraints of this exercise, some of the State response organization was pre-positioned in the area; however, the initial and follow-up notifications were timely and accurate.

The prompt notification system (PNS) for alerting the public within the plume exposure pathway was in place and operational. The system was activated during this exercise to simulate warning the public of significant events occurring at the reactor site.

No violations or deviations were identified.

7. Emergency Communications (82301)

This area was observed to verify that provisions existed for prompt communications among principal response organizations and emergency personnel as required by 10 CFR 50.47(b)(6), 10 CFR 50, Appendix E, Paragraph IV.E, and the specific criteria in NUREG-0654, Section II.F.

Communications among the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organization and offsite authorities were good. No significant communications-related problems were identified during this exercise.

No violations or deviations were identified.

8. Public Education and Information (82301)

This area was observed to determine whether information concerning the simulated emergency was made available for dissemination to the public as required by 10 CFR 50.47(b)(7), 10 CFR 50, Appendix E, Paragraph IV.D, and specific criteria in NUREG-0654, Section II.G.

Information was provided to the media and the public in advance of the exercise. The information included details on how the public would be notified and what initial actions they should take in an emergency. A rumor control program was in place. An Emergency News Center (ENC) was established in Waynesboro and appeared to be effective in distributing the news releases that were prepared and approved in the EOF. Activities at the ENC in Waynesboro were not observed by the NRC evaluation team.

No violations or deviations were identified.

9. Emergency Facility and Equipment (82301)

This area was observed to determine whether adequate emergency facilities and equipment to support an emergency response were provided and maintained as required by 10 CFR 50.47(b)(8), 10 CFR 50, Appendix E, Paragraph IV.E, and the specific criteria in NUREG-0654, Section II.H.

The inspectors observed the activation, staffing and operation of the emergency response facilities and evaluated equipment provided for emergency use during the exercise.

- a. Simulator Control Room - An inspector observed that SCR personnel acted promptly to initiate emergency response to the simulated emergency. Emergency procedures were readily available and the response was prompt and effective.
- b. Technical Support Center - The TSC was activated and staffed promptly upon notification by the Emergency Director of the simulated emergency conditions leading to an Alert emergency classification. The TSC staff appeared to be knowledgeable concerning their emergency responsibilities, and TSC operations proceeded smoothly. TSC equipment and supplies were adequate to support the licensee's response to the simulated emergency. Noise levels in the TSC, although relatively high because of the ventilation system and personnel conversations, did not adversely affect the performance of duties.
- c. Operational Support Center - The OSC was staffed promptly following the activation of the Emergency Paging System. An inspector observed that teams were formed promptly, briefed and dispatched efficiently. The inspector noted good command and control by the OSC Manager. There were no facility or equipment issues observed in the OSC.

- d. Emergency Operations Facility - The EOF was adequately designed, equipped and staffed to support the emergency response. Initial and follow-up messages were done in accordance with the notification procedure. The inspector observed good command and control by the ED and the EOF Manager.

No violations or deviations were identified.

10. Accident Assessment (82301)

This area was observed to determine whether methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency conditions were in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, Paragraph IV.B, and the specific criteria in NUREG-0654, Section II.I.

The accident assessment program included both an engineering assessment of plant status and an assessment of radiological hazards to both onsite and offsite personnel resulting from the simulated accident. During the exercise, the engineering supervisor and his staff functioned effectively in analyzing the plant status so as to make recommendations to the Emergency Director concerning mitigating actions to reduce damage to plant equipment, to prevent release of radioactive materials, and to terminate the emergency condition.

Onsite and offsite radiological monitoring teams were dispatched to determine the level of radioactivity in those areas within the influence of the simulated plume. The field teams reported results to the dose assessment staff in the EOF. The simulated field measurements were used by the EOF dose assessment staff to calculate a source term that was then used to make additional dose projections.

No violations or deviations were identified.

11. Protective Response (82301)

This area was observed to verify that guidelines for protective actions during the emergency, consistent with Federal guidance, were developed and in place, and protective actions for emergency workers, including evacuation of nonessential personnel were implemented promptly as required by 10 CFR 50.47(b)(10), and the specific criteria in NUREG-0654, Section II.J.

Following the declaration of a General Emergency, the licensee made offsite protective action recommendations that were consistent with those in the Emergency Plan. However, prior to those PARs, the States of Georgia and South Carolina had initiated the precautionary evacuation of personnel from a significant portion of the affected zones. The Emergency Director in the EOF provided timely and accurate PARs to State personnel. The PARs were routinely reevaluated for accuracy, and status updates were provided to the offsite authorities.

Habitability was periodically assessed and confirmed by radiation protection personnel throughout the exercise through radiological surveys in the TSC, EOF, and OSC.

Following the Alert declaration, the ED ordered the assembly and accountability of personnel within the protected area. Shortly thereafter, the simulated early dismissal of nonessential personnel was conducted.

12. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine whether the deficiencies identified as a result of the exercise, and the weaknesses noted in the licensee's emergency response organization, were formally presented to licensee management for corrective actions as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.F, and specific criteria in NUREG-0654, Section II.N.

The licensee conducted facility critiques with exercise players immediately following the exercise termination. Licensee controllers and observers conducted additional critiques prior to the formal critique to management on January 13, 1995. Issues identified by the licensee's staff during the exercise were discussed by licensee representatives during the critique. The licensee's critique process was good with the licensee developing a time-line of exercise events and a review of the individual exercise objectives.

No violations or deviations were identified.

13. Action on Previous Inspection Findings (82301)

(Closed) IFI 50-424, 425/93-19-01: Review licensee's assessments and corrective actions for problems identified during the August 4, 1993 EP exercise.

Licensee's corrective actions were effective in alleviating previous problems identified in the 1993 exercise. This IFI is therefore closed.

14. Exit Interview

The inspection scope and results were summarized on January 13, 1995, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

<u>Item Number</u>	<u>Status</u>	<u>Description and Reference</u>
IFI 50-424, 425/93-19-01	Closed	Review licensee's assessments and corrective actions for problems identified during 1993 exercise.

15. Federal Evaluation Team Report

The report by the Federal Evaluation Team (RAC and FEMA) concerning the activities of offsite agencies during the exercise will be forwarded by separate correspondence.

16. Index of Abbreviations Used in This Report

CFR	Code of Federal Regulations
ED	Emergency Director
ENC	Emergency News Center
EOF	Emergency Operations Facility
EP	Emergency Preparedness
FEMA	Federal Emergency Management Agency
NRC	Nuclear Regulatory Commission
OSC	Operational Support Center
PAR	Protective Action Recommendation
PNS	Prompt Notification System
RAC	Regional Assistance Committee
SCR	Simulator Control Room
TSC	Technical Support Center

Attachment:

Exercise Objectives and Standards, and
Scenario Timeline

VEGP 1994 EXERCISE OBJECTIVES AND STANDARDS

The Vogtle Electric Generating Plant (VEGP) emergency preparedness exercise objectives are based on Nuclear Regulatory Commission (NRC) requirements provided in 10CFR50.47, "Emergency Plans," and 10CFR50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities." Additional guidance provided in NUREG-0654, FEMA-RFP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans" was utilized in developing the objectives.

A. Accident Assessment and Classification

- 1.(All) Demonstrate the ability to identify initiating conditions, determine emergency action levels (EAL) parameters and correctly classify the emergency throughout the exercise.

Standard Criteria: Determine the correct highest emergency classification level based on events which were in progress, considering past events, and their impact on the current conditions. This should be done within 15 minutes from the time the initiating condition(s) or EAL is identified.

B. Notifications

- 1.(All) Demonstrate the ability to alert, notify and mobilize site emergency response personnel.

Standard Criteria: Complete checklist 1, Plant Page Announcement, 91002-C, "Emergency Notifications" and perform the announcement within 5 minutes of the initial event classification of an Alert or higher. There is no standard for upgrade announcements.

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- 2.(All) Demonstrate the ability to expeditiously notify state, local and federal authorities (NRC) of emergency conditions.

Standard Criteria: Transmit checklist 2 of procedure 91002-C, "Emergency Notifications" completed through item #3 of Notification form within 15 minutes of event classification (recorded in item #6) for an initial notification of states and local authorities. Method: Voice

Transmit checklist 2 of procedure 91002-C, "Emergency Notifications" completed through item #3 within 60 minutes of last transmittal for a follow-up notification to state and local authorities. Method: Voice or facsimile with voice confirmation.

Transmit information using checklist 3 of procedure 91002-C, "Emergency Notifications" within 60 minutes of event classification for an initial notification of the NRC.

- 3.(All) Demonstrate the ability to warn or advise onsite individuals of emergency conditions.

Standard Criteria: Complete checklist "A" of procedure 91704-C, "Actions For Security During A Radiological Emergency" within 15 minutes of notification (via plant page or telephone from control room).

- 4.(All) Demonstrate the capability of the Prompt Notification System for the public to operate properly when required.

Standard Criteria: Sirens: 90% of the sirens operate properly as indicated by the Whelen feed back system. NOAA Tone Alert Radios: A NOAA Tone Alert Radio is activated.

C. **Emergency Response**

- 1.(All) Demonstrate the capability to direct and control emergency operations.

Standard Criteria: Subjective evaluation of the command and control demonstrated by the Control Room in the early phase and the TSC in the latter phase of the emergency. In general there should be positive control of teams sent out to investigate and make repairs to equipment. Priorities should be established and necessary personnel made aware of the priorities. The TSC should be aware of the status of the plant and marshal resources to mitigate the consequences of the emergency situation.

- 2.(All) Demonstrate the ability to transfer emergency direction from Control Room (simulator) to the Technical Support Center (TSC) and from the TSC to the Emergency Operations Facility (EOF) in a timely manner.

Standard Criteria: Subjective evaluation of briefings that were conducted prior to turnover responsibility. Personnel should document transfer of duties per procedure 91101-C, "Emergency Response Organization" and 91102-C, "Duties Of The Emergency Director" when required.

- 3.(6 Yrs.) Demonstrate the ability to perform assembly and accountability in a timely manner.

Standard Criteria: Protected area personnel assembly and accountability completed within 30 minutes of the Alert or higher emergency declaration public address announcement. There should be 10 or less personnel missing for accountability to be considered satisfactory.

D. **Emergency Response Facilities**

1.(All, except after normal work hours, 6 years)

Demonstrate timely activation of the TSC, Operations Support Center (OSC), and EOF.

Standard Criteria:

TSC and OSC Activation

The TSC and OSC should be activated within about an hour of the initial notification.

EOF Activation

The Emergency Operations Facility will be capable of being activated within about an hour of the initial notification of an Site Area emergency or higher declaration.

Initial notification during normal working hours is the plant page announcement of the declaration of the Emergency. Initial notification after normal working hours is the time the last person that is necessary to activate the facility is notified by the automatic dialer system.

Activation time in any situation shall not be greater than 90 minutes from event declaration.

2.(All, except ENC, 2 yrs.) Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC, and EOF, and Emergency News Center (ENC).

Standard Criteria:

Adequacy of the Emergency Equipment

Subjective evaluation of adequacy of the emergency equipment in the emergency response facilities. Generally there should be sufficient lighting, ventilation, and equipment (copiers, administrative supplies, procedures, maps, drawings, etc.) to support efficient operations of the staff assigned to the emergency facilities.

Adequacy of the Security Provisions

The Security Shift Captain should implement and follow procedure 91704-C, "Actions For Security During A Radiological Emergency".

Adequacy of Habitability Precautions

The Health Physics Supervisor (TSC) should implement procedure 91110-C, "Duties Of The Health Physics Supervisor (TSC)", Health Physics Supervisor Checklist, Subsequent Actions, In-Plant Radiological Assessment after an onsite/offsite release has occurred.

The Dose Assessment Manager should implement the Dose Assessment Manager checklist of procedure 91203-C, "Activation And Operation Of The Emergency Operations Facility", Subsequent Actions step 13.

- 3.(All) Demonstrate the adequacy of communications for all emergency support resources.

Standard Criteria: The emergency response communications listed in procedure 91204-C, "Emergency Response Communications" were available and operational. The communications systems were tested in accordance with TSC, OSC, and EOF Activation Checklists. The ERF personnel were able to operate all specified communication systems. Clear and timely communications links were established and maintained for the duration of the exercise.

E. Radiological Assessment and Control

- 1.(All) Demonstrate the ability to obtain onsite radiological surveys and samples.

Standard Criteria: HP Technicians should demonstrate the ability to obtain appropriate instruments (range and type) and take surveys. In addition airborne samples should be taken when the conditions indicate the need for the information. Contamination or smear surveys may also be required if the scenario conditions warrant.

- 2.(Annual, may be done during a semi-annual HP Drill)

Demonstrate the ability to utilize the post accident sampling system to collect and analyze radiological samples.

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Standard Criteria: A PASS sample should be taken and analyzed for radioactivity. The Sample should be counted in on-site facilities if possible or arrangements made to ship the sample to B & W Laboratory. A grab sample is satisfactory. A satisfactory time is 3 hours from the decision to take a sample until the sample has been analyzed, if it is possible to analyze the sample on site.

- 3.(All) Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers.

Standard Criteria: Emergency workers should be issued self reading dosimeters when radiation levels require it and exposure should be controlled to 10CFR20 limits unless the ED authorizes emergency limits. Exposure records should be available, either from the ALARA computer or a hard copy dose report. Emergency workers include Security and personnel within all emergency facilities. Issue of self reading dosimeters is not required in the TSC or the Control Room.

- 4.(All) Demonstrate the ability to assemble and deploy field monitoring teams in a timely fashion.

Standard Criteria: One Field Monitoring team should be ready to be deployed within 1 hour of being requested from the OSC, and no later than 90 minutes from the declaration of an Alert or higher classification.

- 5.(All) Demonstrate the ability to satisfactorily collect and disseminate field team data.

Standard Criteria: Field data to be collected is dose rate or cpm from the plume, both open and closed window, and air sample gross/net cpm for particulate and iodine if applicable. Satisfactory dissemination is from the field team to the Dose Assessment Manager via the field team communicator and field team coordinator.

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- 6.(All) Demonstrate the ability to develop dose projections and determine appropriate protective actions.

Standard Criteria: Dose projections from the dose assessment computer code should be compared to procedure 91305-C, "Protective Action Guidelines" to determine appropriate protective action recommendations for the public. On site protective actions will normally be determined by direct measurement of the environment.

F. Medical

- 1.(All) Demonstrate the ability to respond to and treat a contaminated injured individual.

Standard Criteria: The emergency first aid team should arrive on medical scene within 10 minutes of notification (plant emergency beeper 911 activation). Within 2 minutes after arrival the team should perform basic ABC's. The team should evaluate for radiological contamination after the medical evaluation assessment. The team should properly package the injured individual for offsite transportation if required. Proper communications with the control room and or the OSC should be maintained for the duration of the exercise.

G. Public Information

- 1.(All) Demonstrate the capability to coordinate development and dissemination of clear, accurate and timely information to the news media.

Standard Criteria: At least one press release should be developed for each emergency class within 30 minutes of the emergency notification. The press release should be accurate and coordinated with appropriate agencies when the ENC is activated with those agencies who are present at the ENC.

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- 2.(2 Yrs.) Demonstrate the ability to brief the media in a clear, accurate, and timely manner.

Standard Criteria: Subjective evaluation by the evaluator of the performance of the company spokesperson(s).

- 3.(2 Yrs.) Demonstrate the capability to establish and operate rumor control in a coordinated fashion.

Standard Criteria: Calls should be returned within 30 minutes with the correct information.

H. **Evaluation**

- 1.(All) Demonstrate the ability to conduct a post-exercise critique to determine areas requiring improvement and corrective action.

Standard Criteria: A exercise timeline should be developed followed by an evaluation of the objectives. Significant problems in achieving the objectives should be discussed to ensure understanding of why the objective was not fully achieved. Recommendations for improvement in non objective areas should also be discussed.

1994 NRC GRADED EXERCISE**January 11, 1995****SCENARIO TIME LINE**

<u>CLASS</u>	<u>TIME</u>	<u>EVENT</u>
	08:00	Start Drill.
	08:15	Loss of Emergency Bus 1BA03. 'B' Diesel Generator (DG) starts but trips due to a fault on 1BA03 not allowing the DG to energize the bus. Duty electrician and PEO investigate problem on bus.
	08:15	Rad monitors RE-007, RE-011, RE-2565, RE-12839 and RE-12444 are lost until power is restored to bus 1NYS & 1NYC2 by normal transfer to alternate power supply and instruments are reset.
ALERT	08:35	ALERT EMERGENCY declared due to the loss of voltage on 1BA03 for > 15 minutes <u>AND</u> RAT 'A' being the only source of power available to 1AA02.
	08:50	Emergency Response Data System (ERDS) to the NRC activated.
	09:00	TSC and OSC activated. EOF coming to standby.
	09:00	Injured person calls in to the control room.
	09:05	Accountability complete.
	09:10	EOF in standby.
	09:10	Digital Metal Impact Monitoring System (DMIMS) event. <ul style="list-style-type: none">• DMIMS annunciator alarms due to multiple impacts in the reactor vessel lower plenum region.
	09:13	Engineering from TSC or Admin Building called to evaluate DMIMS Alarm in Simulator.
	09:15	Reactor Coolant System (RCS) leak of 50 gpm occurs. <ul style="list-style-type: none">• Containment atmosphere radiation monitors RE-2562A and RE-2562C alarm on the Safety Related Display Console (SRDC) and the plant computer.• Control Room Operators enter Abnormal Operating Procedure (AOP) 18004 "Reactor Coolant System Leakage".• Unit shutdown commenced.

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SCENARIO TIME LINE

<u>CLASS</u>	<u>TIME</u>	<u>EVENT</u>
	09:25	Fuel failure occurs because of mechanical damage from loose parts and damage from localized overheating due to flow channel blockage. <ul style="list-style-type: none">• Chemical Volume Control System (CVCS) letdown radiation monitor RE-48000 alarms on the plant computer. Radiation levels in the Reactor Coolant System (RCS) sample area start to increase (RE-007B if reset). Chemistry is directed by the control room to sample the RCS.• Chemistry reports that radiation levels in the primary lab are too high to take normal sample. Control Room directs chemistry to take Post Accident Sample System (PASS) sample.
	09:30	RCS activity = release of 1% fuel gap activity to the coolant.
	09:35	Reactor Coolant System (RCS) Loop 3 Cold Leg Rupture. All RCS activity released into containment. <ul style="list-style-type: none">• Reactor Trip (if not already actuated) and Safety Injection.• Plant Effluent Radiation Monitoring System (PERMS) data no longer available due to Safety Injection.• Containment Spray actuated. RE-2562 is isolated if not done previously.
	09:40	RCS activity = release of 30% fuel gap activity to the coolant.
	09:40	Containment High Range Radiation Monitors (RE-005/006) = $7E+6$ mrem/hr.
	09:50	PERMS restoration should be in progress or completed.
SITE AREA	09:55	SITE AREA EMERGENCY declared due to the Loss of the Fuel Clad and Loss of the RCS fission product barriers.
	10:00	EOF activated.
	10:00	Injured person transported out of protected area, but NOT to a hospital.
	10:05	Power to bus 1BA03 restored.
	10:05	RCS activity = release of 40% fuel gap activity into the coolant.

1994 NRC GRADED EXERCISE**January 11, 1995****SCENARIO TIME LINE**

<u>CLASS</u>	<u>TIME</u>	<u>EVENT</u>
	10:45	Hydrogen burn in containment.
	10:46	Pipe ruptures at containment spray discharge valve HV9001A (Aux. Bldg. Room A13) on containment side of valve. <ul style="list-style-type: none">* Fire alarm for Room A13.* Leak detection alarm for Room A13.* Radiation release path to the atmosphere via the plant vent.* Repair team dispatched to evaluate ability to repair rupture.
	11:00	When RHR is placed in recirculation, all rooms in vicinity become High Rad areas.
GENERAL	11:10	GENERAL EMERGENCY declared due to loss of any two barriers and loss or potential loss of the third barrier. <ul style="list-style-type: none">* Protective Action Recommendations (PAR's): Evacuate Zones A, B-5, C-5, D-5, E-5, F-5, E-10, F-10 and SRS out to 5 miles. Shelter the remainder of the plume EPZ.
	13:00	Drill Terminated.