



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No: 50-302
License No: DPR-72

Report No: 50-302/96-14

Licensee: Florida Power Corporation

Facility: Crystal River 3 Nuclear Station

Location: 15760 West Power Line Street
Crystal River, FL 34428-6708

Dates: October 15-18, 1996

Inspectors: F. Wright, Exercise Team Leader
K. Barr, Plant Support Branch Chief
L. Cohen, Senior Emergency Preparedness Specialist
G. Salyers, Emergency Preparedness Specialist

Approved by: K. Barr, Chief, Plant Support Branch
Division of Reactor Safety

9612170401 961202
PDR ADOCK 05000302
G PDR

EXECUTIVE SUMMARY

Crystal River 3 Nuclear Station
NRC Inspection Report 50-302/96-14

This routine, announced inspection involved the observation and evaluation of the biennial emergency preparedness exercise. The exercise was held in conjunction with emergency response demonstrations by the State of Florida and several local governments on October 16, 1996. This report summarizes the observations of the NRC inspection team as they observed selected portions of the licensee's response in key emergency response facilities during the exercise.

Overall, the licensee's performance during the exercise was adequate and successfully demonstrated the ability to respond effectively to the simulated accident conditions.

The dose assessment staff's performance in the Technical Support Center was very good (P4.8).

Offsite notifications of emergency conditions were prompt and accurate (P4.4).

The Emergency Operations Facility Director was effective in coordinating licensee activities related to the emergency and providing information to Federal, State and local authorities responding to the radiological emergency and to the public (P4.2).

Accident assessment and the development of sound mitigation strategies outside the control room was not strongly demonstrated by the accident assessment teams in the Technical Support Center or Emergency Operations Facility (P4.2).

Report Details

Summary of Exercise Events

This biennial Emergency Preparedness (EP) exercise was conducted in October 16, 1996, during the period of 7:30 a.m. through 2:38 p.m.. The exercise included full participation by the State of Florida and local governmental agencies. Participants included the Florida Division of Emergency Management, the Florida Department of Health and Rehabilitative Services, and the Citrus and Levy County Emergency Management organizations. A Nuclear Regulatory Commission (NRC) emergency response team also participated in the exercise in the Region II Incident Response Center in Atlanta, Georgia, and at the Crystal River 3 Nuclear Station and the Emergency Operations Facility (EOF). The licensee's performance during the exercise was evaluated by an NRC inspection team and the offsite portion of the exercise was evaluated by the Federal Emergency Management Agency. Licensee exercise critiques were held after the exercise was completed and included observations of players, exercise controllers and licensee exercise evaluators. The NRC inspection team reported inspection findings in an exit meeting conducted on October 18, 1996.

VI. Plant Support

P4. Staff Knowledge and Performance in Emergency Preparedness

P4.1 Exercise Scenario

a. Inspection Scope (82302)

The inspectors reviewed the exercise scenario to determine whether provisions had been made to test the integrated capability and a major portion of the basic elements existing within the licensee's emergency plan.

b. Observations and Findings

The scenario was sufficiently challenging and progressed from an Alert to a Site Area Emergency (SAE) and then to a General Emergency (GE). The scenario exercised the onsite and offsite emergency organizations of the licensee and provided sufficient information to the State and local government agencies for their full participation in the exercise.

c. Conclusion

Overall, the scenario progressed as expected and the flow of information to the players was very good. The scenario developed for this exercise was effective in testing the integrated emergency response capability.

P4.2 Emergency Organization

a. Inspection Scope (82301)

The inspectors observed the functioning of the licensee's onsite and offsite Emergency Response Organization (ERO) to determine whether the responsibilities for emergency response were defined and whether adequate staffing was available to respond to the simulated emergency.

b. Observations and Findings

Simulator Control Room (SCR)

The Nuclear Shift Supervisor assumed the responsibilities of the Emergency Coordinator (EC) when the accident conditions were identified. The control room staff adequately performed pre-established emergency responsibilities. The EC properly classified the event as an Alert and ensured the notification message to the offsite authorities was accurate and delivered in a timely manner. Following the classification of the Alert, the EC also directed the call-out of the ERO to staff the Emergency Response Facilities (ERFs). Once alerted, sufficient trained personnel promptly responded to staff and then activate the ERFs.

Technical Support Center (TSC)/Operations Support Center (OSC)

The EC and his staff interacted frequently as plant conditions were monitored and evaluated, emergency classifications upgraded when necessary, offsite agencies notified, and accident assessment and mitigating activities were implemented.

The TSC staff also identified and prioritized the repair activities for the emergency response teams. The inspectors noted that the TSC was inconsistent in naming and tracking the dispatched emergency response teams out of the TSC/OSC, which could result in unnecessary confusion and misdirection of the dispatched personnel in potentially hazardous environments. The licensee planned to review the adequacy of the response team identification and tracking processes for possible improvements.

The licensee had recently established a new accident assessment team for emergency support in the TSC and EOF. Inspectors noted that the team's performance during the exercise was not strong and appeared to need additional training. For example, the team did not demonstrate good understanding of containment hydrogen behavior during reactor accident conditions or an understanding of pressurized thermal shock. Additionally, the observed responsibilities of the accident assessment team appeared confusing at times and occasionally in conflict with the control room's responsibilities. The inspectors noted on occasions, the TSC appeared to be directing the control room staff regarding plant operating and accident mitigation measures rather than providing technical support. The inspectors informed licensee management that the organization responsibilities of the Control Room staff and the TSC staff during accident conditions need to be fully understood by the ERO and clearly demonstrated during exercises. An example of

TSC/Control Room organization responsibilities disagreements was: The control room determined that restoring auxiliary feedwater (AFW) capabilities should be the number one priority success path for mitigating the accident (use diesel fire pump for AFW). The TSC chose to restore the Make-up pump that had been disassembled for maintenance as the number one priority.

Title 50.54(x) states, in part, that a licensee may take reasonable action that departs from a license condition or a technical specification in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent.

The departure from license conditions was expected to be infrequent and used as described in the regulations. During the exercise the TSC staff readily recommended the departure from license conditions, as permitted by 10 CFR 50.54(x). However, the recommended use of 10 CFR 50.54(x) to mitigate accident conditions by the TSC staff was not aggressively controlled to assure that regulatory requirements for the use of 10 CFR 50.54(x) were met and to assure that the time of departure from license conditions was minimized.

Examples of TSC 10 CFR 50.54(x) declarations were:

- To cross tie Emergency Diesel Generator-B to A Bus.
- To use B-DHR pump to A-Make-up pump for containment sump recirculation.

Emergency Operations Facility

Besides having the primary responsibility for Protective Action Recommendations (PARs) and communicating with the offsite authorities, the EOF was the lead facility for performing dose projections once activated. The EOF Director was effective in coordinating licensee activities related to the emergency and providing information to the public and Federal, State and local authorities responding to the simulated radiological emergency.

The inspectors observed the performance and technical support of the newly developed accident assessment team in the EOF and found the team's performance during the exercise was not strong for the same reasons as discussed above for the TSC.

c. Conclusion

The initial on-duty Simulator staff and augmented call-out staff were sufficient to respond and perform defined emergency responsibilities. Overall, the licensee's ERO performance during the exercise was adequate. However, accident assessment and the development of sound mitigation strategies outside the control room was not strongly demonstrated by the TSC and EOF accident assessment teams.

P4.3 Emergency Classification System

a. Inspection Scope (82301)

The inspectors observed selected emergency response personnel to verify that a standard emergency classification and action level scheme was utilized by the licensee's emergency response personnel to properly classify the accident conditions.

b. Observation and Findings

The licensee's Emergency Plan and Implementing Procedures provided an adequate emergency classification system that was effectively utilized by the staff. At approximately 08:42 a.m., the Simulator staff used it effectively to classify the off-normal conditions as an Alert based on the Emergency Action Level (EAL) of "Fire within the Protected Area, Potentially Affecting Safety-Related Systems Greater than 10 Minute Duration." The EC in the TSC declared a SAE at 09:38 a.m. based on the EAL for "Other Conditions that Warrant, Activation of TSC/OSC, EOF, Monitoring Teams, and Public Notification." Approximately 39 minutes later, the EALs were effectively used by the EC to declare a GE at 10:14 a.m. based on "Loss of Main and Emergency Feedwater, No Core Cooling Available with Core Damage Imminent."

c. Conclusion

The licensee's EAL Table was effectively used by the EC and his staff to properly classify the off-normal conditions.

P4.4 Notification Methods and Procedures

a. Inspection Scope (82301)

The inspectors observed the licensee's notification of State and local governmental organizations and emergency personnel to determine whether timely and substantive emergency information was provided in accordance with established procedures.

b. Observations and Findings

The initial emergency notification to the State and local governments was made from the SCR beginning five minutes after the declaration. The licensee's emergency personnel were notified of the emergency conditions via an emergency alarm followed by a Public Address (PA) announcement at 8:47 a.m. The SCR transferred the responsibility for notifications to the emergency communicator in the TSC at 9:15 a.m. The initial notifications of the SAE and the GE were made from the TSC. Notification responsibilities were transferred to the EOF when it became operational at 10:14 a.m., and five follow-up notifications were made from the EOF. Notifications to the NRC were simulated throughout the exercise as an earlier call had determined the NRC Operations Center did not wish to participate in the drill activities. The notifications met licensee goals for timeliness and were accurate concerning plant status and Protective Action Recommendations.

c. Conclusion

The licensee demonstrated the ability to make informative initial and follow-up notifications to the NRC, State and local governments in a timely manner. The licensee's onsite emergency personnel responded promptly to the ERO activation notification.

P4.5 Emergency Communications

a. Inspection Scope (82301)

The inspectors observed the flow of communications from and between the ERFs to determine whether provisions existed for the prompt transmission of emergency communications.

b. Observation and Findings

The inspectors observed that the communications with State and local governments within the Emergency Planning Zones were effective for the prompt transmission of emergency information. Likewise, the Automatic Ringdown phones in the ERFs, the station and commercial phone lines, radios and the plant PA were effectively utilized by emergency response personnel for communicating emergency information.

c. Conclusion

Provisions existed for the prompt communications among principal response organizations to emergency personnel. The licensee's communication systems were effectively used during the exercise to provide timely information and coordinate emergency response.

P4.7 Emergency Facilities and Equipment

a. Inspection Scope (82301)

The inspectors observed the activation, staffing, and operation of selected ERFs to determine whether adequate emergency facilities and equipment were available and maintained to support an emergency response.

b. Observations and Findings

Control Room Simulator

An inspector observed that the on-shift crew in the Simulator acted promptly to initiate the emergency response and to activate the emergency response organization. The facility and equipment supported the crew as they implemented their emergency procedures.

Technical Support Center/Operations Support Center

The TSC and OSC were activated at 9:15 a.m., 33 minutes after the Alert declaration. The facility layout, communication systems, computers, and reference material provided for good technical exchange between the EC and the primary staff.

Emergency Operations Facility

EOF was activated at 10:14 a.m., 36 minutes after the SAE declaration. The facility accommodated the Emergency Director and his staff in an effective manner as they supported the onsite ERO and communicated the status of the events with the public, NRC, State and local governments. Additionally, representatives from the State of Florida Governor's Office, Florida Division of Emergency Management, Florida Department of Health and Rehabilitative Services, and the Citrus and Levy County Emergency Management organizations were provided essential accommodations in the EOF.

c. Conclusion

The ERFs were organized, equipped, and maintained in a manner that facilitated good emergency response.

P4.8 Protective Responses

a. Inspection Scope (82301)

The inspectors observed the protective actions implemented for onsite personnel and the Protective Action Recommendations (PARs) provided by the licensee to the State.

b. Observations and Findings

The EC simulated the evacuation of non-essential personnel from the plant site following the SAE declaration. Following the GE declaration at 10:14 a.m., the EC's initial PAR to the state and local agencies recommended the evacuation of all personnel within 5 miles of the site in all directions. At approximately 10:49 a.m. the licensee revised the PARs and recommended the evacuation of all sectors 0 to 10 miles.

Projected offsite doses were promptly determined by the licensee's dose assessment personnel in the TSC and EOF. The TSC's dose assessment staff was also proactive in anticipating possible radiological releases based on plant conditions and in recommending strategies for minimizing the release of radioactive materials.

c. Conclusion

The licensee adequately demonstrated the ability to implement protective measures for onsite personnel, project offsite doses and to make the required PARs for the protection of the public.

P4.9 Exercise Critique

a. Inspection Scope (82301)

The inspectors observed licensee critiques to determine whether weaknesses noted by the licensee's ERO and exercise evaluators were presented to licensee management.

b. Observations and Findings

The player critiques were well organized. The inspectors observed adequate involvement of exercise participants in the critique process. The controller/evaluator organization identified the significant issues that created problems during the exercise. A formal presentation was provided to licensee management by the licensee's exercise evaluators on October 18, 1996. Overall, the critique process was effective in identifying problems for correction and program improvements.

c. Conclusion

The identification and analysis of the problem areas by exercise participants and licensee evaluators were appropriate. Overall, the critique process was adequate.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on October 18, 1996. The licensee acknowledged the findings presented. No proprietary information is contained in this report.

PARTIAL LIST OF PERSON CONTACTED

Licensee

- *P. Beard, Senior Vice President, Nuclear Operations
- *G. Boldt, Vice President Nuclear Production
- *S. Chapin, Radiological Emergency Planning Specialist, EOF Dose Assessment
- *M. Fuller, Radiological Emergency Planning Specialist, TSC Lead Controller
- *B. Hickie, Director, Nuclear Plant Operations
- *M. Laycock, Radiological Emergency Planning Specialist
- *R. McLaughlin, Nuclear Regulatory Specialist
- *J. Stephenson, Radiological Emergency Preparedness Manager, Exercise Manager

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation, security, and corporate personnel.

*Attended exit interview on October 18, 1996

INSPECTION PROCEDURES USED

- IP 82301: Evaluation of Exercises for Power Reactors
- IP 82302: Review of Exercise Objectives and Scenarios for Power Reactors

ITEMS OPENED, CLOSED, AND DISCUSSED

No items were opened or closed during this review.

LIST OF ACRONYMS USED

CFR	Code Federal Regulations
EAL	Emergency Action Level
EC	Emergency Coordinator
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERF	Emergency Response Facility
ERO	Emergency Response Organization
GE	General Emergency
IP	Inspection Procedure
NRC	Nuclear Regulatory Commission
OSC	Operational Support Center
PAR	Protective Action Recommendation
SAE	Site Area Emergency
SCR	Simulator Control Room
TSC	Technical Support Center

Attachment (8 Pages):
Exercise Objectives and Scenario Narrative

ATTACHMENT 1

EXERCISE OBJECTIVES

NOTE: Bold numbers represent NUREG-0654 elements.

GENERAL OBJECTIVES:

1. Demonstrate the ability to alert and mobilize FPC emergency response personnel and to activate FPC emergency response centers in a timely manner. (**B.5, F.1e**)
2. Demonstrate the adequacy, operability, and effective use of emergency communications equipment.
3. Demonstrate the ability of FPC to support the state of Florida and local authorities in emergency response activities within the plume exposure pathway Emergency Planning Zone (EPZ).
4. Demonstrate that Areas Requiring Corrective Action (ARCA's) observed in the 1995 Exercise have been corrected.
5. Demonstrate the capability to provide adequate working space and to effectively interface with an NRC Site Response Team.

OPERATIONS OBJECTIVES (Simulator Control Room):

1. Demonstrate the understanding of Emergency Action Levels (EAL's) and proficiency in recognizing and classifying emergency conditions.
2. Demonstrate accident assessment and mitigation in the Control Room, including recognition and evaluation of degrading plant conditions, and recommendation of specific corrective actions to stabilize the plant.
3. Demonstrate the ability to perform emergency notifications, as required, to the state of Florida, local authorities, and the NRC. (**E.3, E.4, E.6, F.1c**)
4. Demonstrate an effective turnover of Emergency Coordinator responsibilities between the Shift Supervisor and the Director, Nuclear Plant Operations or Emergency Coordinator On-Call.

ON-SITE EMERGENCY RESPONSE ORGANIZATION OBJECTIVES:

1. Demonstrate effective implementation of EM-206, "Emergency Plan Roster Notification." (**B.5**)
2. Demonstrate accident assessment and mitigation capabilities in the TSC. (**B.7a**)
3. Demonstrate adequate management and control of on-site emergency response capabilities.

4. Demonstrate an understanding of EAL's and proficiency in recognizing and classifying emergency conditions in the TSC.
5. Demonstrate the receipt and analysis of all field monitoring data and coordination of those results with non-FPC agencies at the EOF. (F.1d, H.12)
6. Demonstrate an effective transfer of notification responsibilities from the Emergency Coordinator to the EOF Director when the EOF is operational.
7. Demonstrate the effectiveness and control of the Emergency Repair Team.
8. Demonstrate the effectiveness and control of the Emergency Medical Technician(s). (F.2, L.2)
9. Demonstrate the effectiveness and control of the Emergency Sample Team (samples will be simulated). (I.2)
10. Demonstrate the effectiveness and control of the Radiation Monitoring Team. (H.7, I.7, I.9)
11. Demonstrate provisions and decision-making capability for utilization of evacuation routes. (J.2)

CORPORATE EMERGENCY SUPPORT ORGANIZATION OBJECTIVES:

1. Demonstrate effective implementation of REP-02, "Activation and Notification of the Corporate Emergency Support Organization." (B.5, F.1e)
2. Demonstrate the ability to establish and maintain appropriate communications with State and Federal Emergency Management representatives, including the recommendation of protective actions. (B.7b, E.4, E.6, I.10, J.7)
3. Demonstrate plans and procedures for re-entry and recovery. (M.1, M.3)
4. Demonstrate provisions for communication with the NRC from the EOF. (F.1f)

RADIOLOGICAL CONTROL OBJECTIVES:

1. Demonstrate the ability to perform radiological monitoring and assessment in the plant and site environs. (H.7, I.7, I.9)
2. Demonstrate effective estimation and assessment of a (simulated) release of airborne radioactivity to the environment. (I.3a, I.10)
3. Demonstrate the ability to provide the Emergency Coordinator and the EOF Director with timely and sound emergency protective action recommendations based on assessment of radiological conditions.

4. Demonstrate the availability and operability of emergency supplies and equipment.
5. Demonstrate the ability to control radiological exposure to emergency workers and Generating Complex Personnel. (K.1)

SECURITY OBJECTIVES:

Demonstrate the capability of maintaining on-site security throughout an emergency at CR-3, including the capability of establishing and enforcing access control points.

CORPORATE COMMUNICATIONS OBJECTIVES:

1. Demonstrate timely activation of the ENC. (B.5)
2. Demonstrate the ability to obtain emergency-related information.
3. Demonstrate the ability to disseminate timely, accurate, and appropriate emergency information. (B.7c)

ATTACHMENT 2

1996 RADIOLOGICAL EMERGENCY RESPONSE PLAN EXERCISE
NARRATIVE SUMMARY

timeline.tbl 10/9/96

INITIAL CONDITIONS

PLANT STATUS:

- The plant has been operating at 100% power for 145 days.
- Primary-to-secondary leakrate is about 1.5 gpd.
- Control power circuitry repairs are in progress on the Offsite power transformer (MTTR-9). Emergency Safeguards (ES) busses are on the Backup ES Transformer. Unit busses are on the Startup Transformer. Breakers 4900 and 4902 are red-tagged.
- Sporadic arcing has been reported in the switchyards, possibly from salt spray.

EQUIPMENT STATUS:

- Make-up Pump MUP-1B is out of service for repairs and is partially disassembled. The Plant Review Committee has approved single valve protection.
- Emergency Feedwater Pump EFP-2 is out of service for repairs. The plant is 12 hours into 72 hour Technical Specification Action Statement that will require shutdown if EFP-2 is not repaired.
- Air Handling Fan AHF-1C is out of service due to hard ground on the motor.
- Following the performance of Surveillance Procedure SP-181, the personnel airlock inner door seal failed SP-430. The plant is 6 hours into 24 hour Technical Specification Action Statement that will require shutdown if the seal is not repaired. A maintenance crew has just entered the Reactor Building and gasket removal has started.

MAINTENANCE ACTIVITIES:

- Repairs on MUP-1B and EFP-2 will continue this shift.
- A radwaste shipment of sealands just exited the Protected Area.
- A PM on the Refuel Floor overhead crane is scheduled as well as other routine SPs and PMs.

MISCELLANEOUS:

- An anti-nuclear group has been granted a permit to demonstrate at the Access Road entrance at 1400 this afternoon.
- A tropical depression in the southwestern Gulf of Mexico has just been upgraded to a Tropical Storm. The system is at 19.2° N and 94.5° W, moving NNW at 11 mph.

SCENARIO DESCRIPTION

NOTE: Participant interaction with the Simulator may slightly alter the timing of certain operational events. The times listed are an approximation and will be used should the Simulator fail.

0730	Initial Conditions and ground rules are presented to the operating crew in the Simulator Control Room and participants in the shops.
0828	Several alarms are received in the Simulator Control Room indicating potential problems with MUP-1C. The Simulator Control Room operator directs the Assistant Nuclear Operator (ANO) to investigate.
0830	Upon arrival at the makeup pump room, the ANO radios that there is oil spraying and heavy black smoke. The Fire Team Leader and the Fire Brigade are dispatched to the scene.
0845	Due to a fire lasting greater than 10 minutes, potentially affecting safety-related systems, an ALERT is declared. Technical Support Center and Operational Support Center (TSC/OSC) staffing and in-shop accountability begins. Setup personnel may begin preparation for staffing and activation of the EOF.
0850	The Fire Team Leader radios that the fire is out but MUP-1C has sustained serious damage. An assessment is in progress.
0855	The damage reported from the fire scene is that MUP-1C has sustained extensive damage to wiring, the lube oil pump, temperature sensors, and the stator motor. A burned flammable cleaning solvent container was found in the room. There is smoke in the Auxiliary Building.
0900	Simulator Control operators may begin a plant shutdown in accordance with Operating Procedure OP-204 at less than 15% per hour.
0925	The TSC/OSC is declared operational.
0930	A degraded insulator in the 230 KV switchyard explodes due to salt buildup causing a loss of offsite power. The reactor trips due to loss of feedwater. Both Emergency Diesel Generators start and load their respective busses. MUP-1A and EFP-1 are available to manage the event.

0931	The repair crew working on the seal in the personnel hatch airlock is startled by the loss of power and hurriedly exits the Reactor Building through the exterior door. The door is closed rapidly and bounces back causing the drive train to jam with the door open about 6" off the sealing surface. The interior door is closed but the gasket installation has not been completed on a two-foot strip on the bottom of the door.
0950	The fuel rack of Emergency Diesel Generator EDG-1A will not actuate a full open stroke due to an accumulation of lubrication and dirt resulting in a loss of the "A" ES 4160 Volt buss. Core temperature can be temporarily controlled via natural circulation and use of Steam Generator inventory.
0955	With MUP-1A and EFP-1 no longer available, a SITE AREA EMERGENCY is declared due to loss of hot shutdown capability. The Site Evacuation alarm is sounded and Emergency Operations Facility (EOF) activation is initiated.
1000	The degraded plant conditions may prompt the decision to send a repair crew back to the personnel hatch to attempt to close the airlock and restore containment integrity. Dose rates in the plant are normal at this time.
1010	The TSC/OSC is preparing to dispatch a repair team to EDG-1A. The decision may be made to start a backfeed procedure or to crosstie the ES buses to restore unit power.
1020	While the airlock repair crew is attempting to reopen the jammed exterior door, one of the drivetrain gears breaks.
1030	Reactor Coolant System (RCS) pressure reaches 2400 psig and subcooling margin falls below administrative guidelines. The operator opens the Pilot Operated Relief Valve (PORV) briefly releasing coolant to the Reactor Coolant Drain Tank to reduce RCS pressure and maintain adequate subcooling margin. This evolution may be repeated several times.
1051	The RCDT Rupture Disk blows and a leak develops on the top of the pressurizer allowing RCS to be released to the Containment. A radiological release to the environment begins through the defective airlock seal. The airlock repair crew is quickly evacuated.
1055	The EOF is declared operational. The Emergency News Center begins preparing for the first news briefing.

1056	<p>A GENERAL EMERGENCY is declared due to loss of two of three fission product barriers (RCS and Containment) with a potential of losing the third (fuel cladding). This declaration may be made after losing subcooling margin.</p> <p>PROTECTIVE ACTION RECOMMENDATIONS ARE MADE BASED ON PLANT CONDITIONS AS FOLLOWS:</p> <p>EVACUATE 0-5 MILES 360° (ALL SECTORS)</p>
1059	Reactor Building pressure exceeds 4 psig and automatic isolation occurs.
1110	The recommendation may be made to start Building spray to reduce Reactor Building pressure and source term.
1152	The Simulator Control Room receives a report that the Offsite Power Transformer will be restored in several minutes, however, the core beginning to superheat.
1159	<p>The core is at 160 - 170 ° F superheat and Region 3 Inadequate Core Cooling Curve is entered indicating possible fuel cladding damage. Offsite Power is now available. Simulator Control Room operators initiate recovery.</p> <p>DUE TO POSSIBLE CLADDING DAMAGE, PROTECTIVE ACTION RECOMMENDATIONS ARE INCREASED AS FOLLOWS:</p> <p>SHELTER 5-10 MILES 360° (ALL SECTORS)</p>
1203	The Offsite Power Transformer is at 50% rated capacity restoring power to the A 4160 ES buss. MUP-1A and EFP-1 are immediately placed in service. EFP-1 is supplying >350 gpm to each steam generator.
1207	RCS pressure is below 600 psig initiating Core Flood Tank injections. However, the cold water thermally shocks the core causing massive clad failure and an increase in activity released to the Reactor Building and the environment.
1215	Preparation is begun to supply the running High Pressure Injection (HPI) pump from the Low Pressure Injection (LPI) pumps.
1225	Core temperature is reduced and subcooling margin is restored.
1230	Core Flood Tanks injections are complete.

1244	An operator performing a valve position check to align the "B" LPI train for decay heat removal slips while exiting "B" Decay Heat Pit hitting his/her head on the metal rail (at entrance), landing on floor (95' elevation) by entrance to pit. The Operator has a laceration on the forehead and possible broken arm.
1245	The Operator radios Simulator Control Room that he/she is injured. (This may be reported by HP.)
1246	The Simulator Control Room dispatches the Assistant Nuclear Shift Supervisor (ANSS) and EMT(s) to the injury scene.
1254	The ANSS reports that an ambulance is required. Citrus EMS is notified via 911 by the Simulator Control Room. (SIMULATED)
1300	Recovery planning begins at the EOF.
1305	The injured person is taken to the Hot Machine Shop to be transferred to ambulance.
1310	The ambulance arrives on-site. (SIMULATED)
1315	The ANSS reports to the Simulator Control Room that patient is en route to hospital. (SIMULATED)
1430	The Exercise is terminated once confirmation is received that all onsite and offsite exercise objectives have been observed or accomplished.