



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

DEC 10 1992

Report No.: 50-302/92-26

Licensee: Florida Power Corporation
3201 34th Street, South
St. Petersburg, FL 33733

Docket No.: 50-302

License No.: DPR-72

Facility Name: Crystal River 3

Inspection Conducted: November 2-6, 1992

Inspector: F. N. Wright
F. N. Wright, Team Leader

12/9/92
Date Signed

Team Members: D. Barss, NRR
J. Jamison, Consultant
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Approved by: K. Barr
K. Barr, Chief
Emergency Preparedness Section
Radiological Protection and Emergency
Preparedness Branch
Division of Radiation Safety and Safeguards

12/9/92
Date Signed

SUMMARY

Scope:

This routine, announced inspection involved the observation and evaluation of the annual emergency preparedness exercise. Emergency organization activation and response were selectively observed in the licensee's Emergency Response Facilities including: Simulator Control Room, Technical Support Center, Operational Support Center, Emergency Operations Facility, and Emergency News Center. The inspection also included a review of the exercise scenario and observation of the licensee's post exercise critique. This exercise was a Partial Participation Exercise for State and local response agencies.

Results:

In the areas inspected, violations or deviations were not identified. Two exercise weaknesses were identified: (1) concerning failure to issue clear, accurate and timely Notification messages to State and local agencies and (2) Failure of the TSC accident assessment staff to recognize unreasonable estimated dose rates at the site boundary which resulted in an unnecessary General Emergency classification and protective action recommendations. The licensee's performance during the exercise was good, with the licensee

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successfully meeting most of the exercise objectives. Overall, the exercise demonstrated an effective capability to protect the public health and safety in the event of a radiological emergency.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *A. Auger, Manager, Nuclear Technical Training
- *R. Blume, Supervisor, Nuclear Special Training
- *G. Boldt, Vice President, Nuclear Production
- *S. Chapin, Radiological Planning Specialist
- *S. Cheanenko, Senior Quality Auditor
- *M. Collins, Radiological Planning Specialist
- *C. Crosten, Nuclear Operations Instructor
- R. Davis, Shift Supervisor
- *D. deMontfort, Simulator Instructor
- T. Fleming, Simulator Controller
- *J. Frijouf, Nuclear Regulatory Specialist
- E. Froats, Manager, Nuclear Compliance
- *R. Fuller, Senior Nuclear Licensing Engineer
- *S. Garry, Corporate Health Physicist
- *G. Halnon, Manager, Nuclear Plant Technical Support
- *B. Hinkle, Director, Nuclear Plant Operations
- *M. Jacobs, Area Public Information Coordinator
- *S. Johnson, Manager, Chemistry and Radiation Protection
- *L. Kelly, Director, Nuclear Operations Training
- *M. Laycock, Radiological Planning Specialist
- *T. Leachmann, Manager, Nuclear Chemistry
- *G. Longhouser, Superintendent, Nuclear Security
- *S. Mansfield, Nuclear Training Instructor
- *W. Marshall, Manager, Nuclear Plant Operations
- *D. McCollough, Supervisor, Nuclear Chemistry
- *P. McKee, Director, Quality Programs
- *B. McLaughlin, Nuclear Regulatory Specialist
- *L. Morfatt, Nuclear Shift Manager
- *J. Mogg, Supervisor, Telecom
- *T. Neaman, Supervisor, Nuclear Plant Security
- J. Owen, Nuclear Operations Instructor
- *S. Robinson, Manager, Quality Assessment
- *C. Springer, Supervisor, Nuclear Simulator Training
- *J. Stephenson, Manager, Radiological Emergency Planning
- *W. Stephenson, Supervisor, Nuclear Safety
- *R. Widell, Director, Nuclear Operations Site Support
- D. Wilder, Radiation Protection Manager
- *M. Williams, Specialist, Radiological Emergency Planning

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

Nuclear Regulatory Commission

R. Freudenberger, Resident Inspector

*P. Holmes-Ray, Senior Resident Inspector

*Attended Exit Meeting

2. Exercise Scenario (82301, 82302)

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test the integrated capability and a major portion of the basic elements existing within the licensee's Emergency Plan and organization 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 scenario was reviewed in advance of the scheduled exercise date and was discussed with licensee representatives. The scenario developed for this exercise was adequate to exercise fully the onsite and offsite emergency organizations of the licensee and to provide sufficient emergency information to the State and local government agencies to facilitate their full participation in the exercise. The exercise scenario was well organized, detailed, and sufficiently challenging to exercise the participants.

No violations or deviations were identified.

3. Assignment of Responsibility (82301)

This area was observed to determine that primary responsibilities for emergency response by the licensee have been specifically established and that adequate staff was available to respond to an emergency as required by 10 CFR 50.47(b)(1), 10 CFR 50, Appendix E, Paragraph IV.A, and specified criteria in NUREG-0654, Section II.A.

The inspector observed that the onsite and offsite emergency organizations were adequately described and the responsibilities for key organization positions were clearly defined in approved plans and implementing procedures.

No violations or deviations were identified.

4. Onsite Emergency Organization (82301)

The licensee's onsite emergency organization was observed to determine that the responsibilities for emergency response were unambiguously defined, that adequate staffing was provided to ensure initial facility accident response in key functional areas at all times, and that the interfaces were specified as required by 10 CFR 50.47(b)(2), 10 CFR 50, Appendix E, Paragraph IV.A, and specific criteria in NUREG-0654, Section II.B.

The inspector observed that the initial onsite emergency organization was well defined, the responsibility and authority for directing actions necessary to respond to the emergency were clear and that staff were available to fill key functional positions within the organization.

The licensee adequately demonstrated the ability to alert, notify, and mobilize licensee response personnel. Augmentation of the initial onsite emergency response organization was accomplished through mobilization of additional day-shift personnel and activation of the Emergency Response Facilities (ERFs). The inspector observed the activation, staffing, and operation of the emergency organization in the Simulator Control Room (SCR), Technical Support Center (TSC), the Operational Support Center (OSC), Emergency News Center (ENC), and the Emergency Operations Facility (EOF). The inspector determined that the licensee was able to staff the facilities in a timely manner. Staffing and assignment of responsibilities at the ERFs were consistent with the licensee's approved procedures. Because of the scenario scope and conditions, long term or continuous staffing of the emergency response organization were not required.

No violations or deviations were identified.

5. Emergency Response Support and Resources (82301)

This area was observed to determine that arrangements for requesting and effectively using assistance resources have been made, that arrangements to accommodate State and local staff at the licensee's EOF have been made, and that other organizations capable of augmenting the planned response have been identified as required by 10 CFR 50.47(b)(3), 10 CFR Part 50, Appendix E, Paragraph IV.A, and specific criteria in NUREG-0654, Section II.C.

State and local staff could be accommodated at the EOF. Arrangements for requesting offsite assistance resources were in place.

No violations or deviations were identified.

6. Emergency Classification System (82301)

This area was observed to determine that a standard emergency classification and action level scheme were in use by the nuclear facility licensee as required by 10 CFR 50.47(b)(4), 10 CFR 50, Appendix E, Paragraph IV.C, and specific criteria in NUREG-0654, Section II.D. The licensee's classification scheme is defined in the Emergency Plan and EPIP-202. Duties of the Emergency Coordinator, Revision (Rev.) 40, dated September 25, 1992.

The designated Shift Supervisor in the SCR promptly and correctly used the procedure to identify and classify the Notification of Unusual Event (NOUE) and the Alert as did the Emergency Coordinator in the TSC to classify the Site Area Emergency and General Emergency. Classifications for plant conditions were made in a timely manner and were consistent

with approved emergency procedures.

During the exercise an error in calculating projected offsite dose rates was made. The error resulted in the projection of very high dose rates for the child thyroid, at the site boundary. In accordance with licensee procedures, a General Emergency was declared at 09:32 a.m. and Protective Action Recommendations (PARs) were made in a Notification Message issued at 09:52 a.m. When the offsite dose rate error was confirmed by the staff (Paragraph 11), the licensee elected to remain at the General Emergency classification. The inspector determined that the licensee made the decision to remain in a General Emergency, in part, due to Citrus County's protective measures that had already begun at 09:30 a.m. and the State's insistence to continue with the ordered evacuation. State representatives were concerned with the wide spread confusion that could occur should the protective actions be canceled. The licensee decided to remain in the General Emergency classification and recommended an evacuation and sheltering plan that was similar to that issued by Citrus County.

The dose projection error was considered an Exercise Weakness and is discussed in further detail in Paragraph 11.

Following initial evacuation the licensee's State and local agencies began discussions on recovery and permitting the evacuated community to return to evacuated areas. The licensee downgraded the emergency from a General to an Alert at 13:00 p.m., which was the classification guidance for the remainder of the exercise.

The inspector determined that EPIP EM-202 lacked specific procedural guidance for downgrading emergency classifications and entering a recovery phase. Such criteria should include, as a minimum, whether or not a release is continuing, whether the plant conditions are stable and expected to remain so, whether the full emergency response organization is needed to support safe and stable operations, and whether radiological and other conditions permit resumption of normal access to the plant and surrounding areas. Licensee representatives acknowledged the procedural deficiency and committed to improve de-classification in emergency preparedness procedures. The inspector stated that a review of the licensee's procedures addressing de-classification would be reviewed in a future inspection as an Inspector Followup Item (IFI).

IFI 50-302/92-26-01: Review licensee emergency procedures for guidance on downgrading emergency classifications and entering initial recovery phase of emergencies.

No violations or deviations were identified.

7. Notification Methods and Procedures (82301)

This area was observed to assure that procedures were established for notification of State and local response organizations and emergency personnel by the licensee, and that the content of initial and followup

messages to response organizations was established. This area was further observed to assure that means to provide early notification to the population within the plume exposure pathway were established pursuant to 10 CFR 50.47(b)(5), Paragraph IV.D of Appendix E to 10 CFR 50, and specific guidance specified in Section II.E of NUREG-0654.

Procedures for making notifications to offsite authorities were defined in Emergency Plan and EPIP EM-202. During the exercise the SCR, TSC, and EOF prepared and issued 1, 5 and 5 Notification messages, respectively. The inspector observed that Emergency Notification Message forms were consistently approved with information errors or information blocks incomplete. The inspector observed the following problems with offsite notification messages generated during the emergency exercise:

- Emergency Notification Messages were not numbered or given a serial number;
- No Emergency Notification Message was made for the NOUE. The initial Notification Message to the State and local agencies, issued at 07:38 a.m., reported the declaration of an Alert classification made at 07:35 a.m., due to a fire in the diesel generator room. However, the message did not report the declaration of an NOUE that had been made at 07:26 a.m., due to a bomb threat. The inspector noted that the Notification Message to the NRC reporting the Alert classification also reported the NOUE.
- Notification Message 2 reported the Alert emergency declaration time as 08:18 a.m. instead of 07:35 a.m., as shown on Notification Message 1. The transmission of Message number 2 began at 08:15 a.m. and ended at 08:25 a.m.
- On Notification Messages 4, 5 and 6; the licensee checked "C. A Release is Occurring-- Expected Duration", in Section 7 of the form. However, the licensee did not include an estimate of release duration.
- Notification Messages 6 and 7 reported "High Thyroid Dose Rates" in Section 5 of the form while reporting the highest offsite thyroid dose rates were less than 2.8 mRem and 0.5 mRem respectively in Section 10 of the form.
- Notification Messages 8 and 9 reported "Radiation Release In Progress" in Section 5 of the form. However, the licensee indicated there was no release in Section 7. of the form by checking "D. A Release Occurred, but stopped-Duration 2.5".
- On Notification Message 11, the licensee reported the down grade of the emergency classification from a General Emergency to an Alert but did not provide any basis for the de-classification

- o Notification Message 4 was issued at 09:25 a.m. to provide updated information on a Site Area Emergency classification. The message reported child thyroid dose rates of 50 Rem/hr at the site boundary. A condition which should have resulted in a General Emergency classification. The licensee declared a General Emergency classification at 09:32 a.m.

Additionally, Emergency Notification Message number 5 reporting the General Emergency classification was not timely. The General Emergency was declared at 09:32 a.m. The Emergency Coordinator approved the message for release at 09:49 a.m. and transmission of the message began at 09:52 a.m., approximately 20 minutes after the General Emergency classification was made.

The numerous problems identified above were minor when considered individually; however, in aggregate they indicate a general weakness in the licensee's ability to provide clear and accurate Emergency Notification Messages to State and local agencies. The inspector stated that failure to provide clear, accurate and timely messages to the State and local agencies was an exercise weakness.

Exercise Weakness 50-302/92-26-02: Failure to provide clear, accurate and timely messages to the State and local agencies.

No violations or deviations were identified.

8. Emergency Communications (82301)

This area was observed to determine 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 specific criteria in NUREG-0654, Section II.F. The inspector observed that adequate communications existed among the licensee's emergency organizations. The TSC and OSC staffs were kept informed of plant status by the TSC Emergency Coordinator (EC), through routine briefings. OSC teams dispatched to perform work in the plant maintained good communication with OSC and TSC personnel.

In general, communications and interfaces between a licensee's and State's staff were adequate. However, there was a communication problem with Citrus County. At 10:00 a.m., the EOF held its first joint briefing which included licensee, State and local agencies. The facility had activated at 09:30 a.m. and the State representatives had been in the facility only a few minutes prior to the meeting. At that briefing a Citrus County representative reported that protective actions had been ordered by the county at 09:30 a.m. Neither the State nor the licensee representatives were aware that the Citrus County had taken protective actions (Paragraph 12). Licensee representatives acknowledged the communication problem and planned to conduct addition training sessions with local county agencies to improve communications and their understanding of consequences for various reactor accidents.

No violations or deviations were identified.

9. Public Education and Information (82301)

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

The ENC was staffed and activated by pre-staged response personnel. Joint news releases were coordinated and released from the ENC. In addition, several news conferences were conducted. The inspector observed the preparation of news releases and the preparation of material for briefings. The Joint Information Center facilities for utility, State, local, and NRC representatives were adequate.

No violations or deviations were identified.

10. Emergency Facilities and Equipment (82301)

This area was observed to determine that 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 specific criteria in NUREG-0654, Section II.H.

The inspector observed the activation, staffing and operation of key ERFs, including the SCR, TSC, OSC, and EOF. In addition, the inspector observed emergency fire and medical drills.

a. Simulator Control Room

The Shift Supervisor demonstrated excellent command and control throughout the exercise. The Shift Supervisor and Shift Manager quickly and accurately evaluated conditions and the Emergency Action Levels (EALs) to declare the Unusual Event and the Alert classifications. The Operations staff worked well as a team and assessments of plant conditions were good. The turnover briefing from the control room to the TSC was effective.

Emergency procedures were readily available. Both reactor operators and supervisors demonstrated good use of procedures throughout the exercise. During the exercise the inspector observed that Procedure OP-305, "Operation of the Pressurizer" Rev. 12, dated 3/19/91 was available for use in the SCR. The current revision to the procedure was Rev. 14. This was identified by the operators when attempting to use high pressure auxiliary spray. The system was recently installed and was not included in Rev. 12 of the procedure. The licensee's critique identified this issue as a problem for corrective action. The inspector verified that the correct revision of the procedure was located in the control room.

Use of the plant's simulator, in an active mode, improved realism of the exercise for Operations personnel. The use of the simulator was considered a program strength. It was the licensee's first use of the simulator in a graded exercise and it performed well.

No violations or deviations were identified.

- b. TSC - The TSC was activated and staffed promptly upon notification by the Emergency Coordinator of the simulated emergency condition leading to an Alert emergency classification. The TSC appeared to have adequate equipment for the support of the assigned staff. The facility layout provided for a good interface between the Emergency Coordinator and his staff.

Strengths noted in the TSC included good command and control of the emergency organization. Periodic briefings regarding the incident status and ongoing mitigating actions were routinely given by the Emergency Coordinator. The briefings were timely and sufficiently detailed.

The radiological status board was not maintained such that it served a clear and positive purpose, in the TSC's assessment of conditions in and around the plant. For example:

- The 09:45 a.m. field team data logged on the status board showed whole body dose rate of 1 mRem/ hour, and the Iodine as "1.18 E2" (with no units). The last value appeared to be a sample count rate, not a dose (or dose commitment) rate, but no one questioned it. Subsequent iodine values were given in mRem/hr.
- No data were entered for "Chem data", RCS or Condensate.
- The "recommended protective actions" block was not utilized.
- Only two field team reports were logged on the board through the entire exercise, one for time 09:45 a.m. and one for time 11:45 a.m..

No violations or deviations were identified.

- c. OSC - The OSC assembly area, located in the TSC facility was staffed expeditiously, following the order to activate. The OSC staff maintained good communication with TSC staff. Necessary emergency equipment was available to support OSC repair team activities.

Emergency Repair Teams (ERTs) planned plant entries with the OSC, TSC and HP staffs before entry into the plant areas. ERTs maintenance activity and health physics briefings were timely and included potential radiological conditions and required protective

measures. Proper radiological control measures were implemented and radiological conditions were monitored by HP technicians accompanying OSC teams. No problems were noted with ERT deployment or controls. However, it was not clear at any point in time what teams were deployed and with what priority. Strong prioritization, controls and monitoring practices were not observed by the inspector. Such controls are essential for proper emergency response organization management.

No violations or deviations were identified.

- d. EOF - Activation of the EOF was not a specific exercise object. The EOF was located offsite in the Simulator/Training Building located outside the 10-mile EPZ. The facility appeared to be adequately designed and equipped to support an emergency response. The EOF was promptly staffed and activated with pre-staged qualified personnel. The EOF Director provided timely and accurate status updates to the EOF staff.

No violations or deviations were identified.

11. Accident Assessment (82301)

This area was observed to determine that adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition were in use as required by 10 CFR 50.47(b)(9), 10 CFR Part 50, Appendix E, Paragraph IV.B, and specific criteria in NUREG-0654, Section II.1.

The accident assessment program included an engineering assessment of plant status and an assessment of radiological hazards to both onsite and offsite personnel resulting from the accident.

The TSC staff (dose assessment and accident assessment) carefully considered and suggested strategies for minimizing both atmospheric and liquid radioactive releases while cooling down and stabilizing the plant.

Radiological Control Objective, Number 2. was: "Demonstrate effective estimation and assessment of a simulated release of airborne radioactivity to the environment".

A calculational error was made in determining the initial radioactive dose rates for the site boundary. The reported values at 09:08 a.m. were 43.24 mRem/hour for the whole body and 50,000 mRem/hour for the child thyroid. A subsequent re-calculation at 09:53 a.m. resulted in dose rates of 1.39 mRem/hour for the whole body and 14.41 mRem/hour for the child thyroid.

On-Site Emergency Response Organization Objective, Number 3. was: "Demonstrate accident assessment and mitigation capabilities in the Technical Support Center". During the exercise, the TSC staff failed to

promptly recognize that high offsite dose projections, 50 Rem/hour at site boundary for child thyroid, reported by the dose assessment staff were inappropriate for existing reactor conditions at 09:30 a.m. At that time there was no evidence of damaged fuel nor was Reactor Coolant System activity abnormal. The dose rates projected at the site boundary were not possible with existing conditions. As a result, an unreasonably high projected thyroid dose was used as the basis for a General Emergency declaration. Failure to demonstrate reasonable accident assessments, relative to the projection of offsite dose rates, with known plant conditions was identified as an exercise weakness.

Exercise Weakness 50-302/92-26-03: Failure to demonstrate reasonable accident assessments, relative to the projection of offsite dose rates, with known plant conditions.

No violations or deviations were identified.

12. Protective Responses (82301)

This area was observed to determine 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 specific criteria in NUREG-0654, Section II.J.

The inspector observed the following onsite protective measures:

- When a bomb threat was reported at approximately 07:22 a.m. the Emergency Coordinator made a PA announcement to evacuate the Nuclear Administration Building. Access to the building was not permitted until the Security Staff surveyed the facility and declared it safe for occupation.
- An Alert was declared at approximately 07:30 a.m. and at 07:42 a.m. a PA announcement was made for all non-essential personnel to report to their local assembly area. The licensee made the precautionary evacuation in accordance with licensee procedures.
- A SAE was declared at 08:50 a.m. At 08:55 a.m. a PA announcement was made for all non-essential personnel to report to the Main Assembly Area for accountability. Accountability was completed and reported at 09:19 a.m.

The inspector verified that the licensee had and used emergency procedures for formulating PARs for offsite populations within the 10-mile EPZ. During the exercise, PARs were routinely reevaluated for accuracy and status updates were provided to the offsite authorities.

The licensee made initial PARs at the declaration of a General Emergency. The General Emergency was declared at 09:32 a.m. and

reported in Emergency Notification Message 5 issued at 09:52. At about the same time the General Emergency Notification was issued, recalculations of projected offsite doses showed offsite doses were much less than those requiring the declaration of a General Emergency and protective actions. A briefing in the EOF with licensee, State and local agencies was held at 10:00 a.m. The licensee reported that an error had been made in the offsite dose rate projections and there did not appear to be any reason for remaining at the General Emergency classification or to take protective actions. However, the representative from Citrus County reported that the county had ordered protective actions at 09:30 a.m. based upon the information provided in Emergency Notification messages. State representatives reported that they would not permit the cancellation of the evacuation that had already been started. The State representatives reported that a cancellation would cause too much confusion. Therefore, the licensee decided to remain in the General Emergency classification and recommend an evacuation and sheltering plan similar to that issued by Citrus County.

At 09:30 a.m. Citrus County issued the following PARs: evacuated 0-5 mi. 360 degrees; evacuated 5-10 mi. in Sectors E, F, G, H, and J; and sheltered the rest.

At 09:55 a.m. the licensee recommended the following PARs: evacuation 0-5 mi. 360 degrees; evacuation 5-10 mi in Sectors F, G, and H; and shelter the rest. The county's PAR's were more conservative than the licensee's. The licensee revised the PARs in Notification Message number 7 issued at 10:52 a.m. to match the County's.

No violations or deviations were identified.

13. Radiological Exposure Control (82301)

This area was observed to determine that means for controlling radiological exposures during an emergency were established and implemented for emergency workers, and that these means included exposure guidelines consistent with EPA recommendations as required by 10 CFR 50.47(b)(11), and specific criteria in NUREG-0654, Section II.K.

An inspector noted that radiological exposures were controlled throughout the exercise by issuing supplemental dosimeters to emergency workers and by periodic surveys in the ERFs. Exposure guidelines were in place for various categories of emergency actions, and adequate protective clothing and respiratory protection were available and used as appropriate.

No violations or deviations were identified.

14. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine whether shortcomings in the performance of the exercise were

brought to the attention of management and documented for corrective action pursuant to 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.E, 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 November 6, 1992.

The quality of the player critiques varied with facility. In some player critiques the exercise objectives and a review of the scenario "as planned" were not made and the players were not given sufficient resources to make comments or suggestions for improvements.

The critique to management was well organized and very comprehensive and included a review of the objectives that had been established for demonstration during the exercise. Issues identified during the exercise were thoroughly discussed by licensee representatives during the critique. The presentation indicated the controllers/evaluators had been effective in identifying exercise problem areas and critiqued the performance of the players in an objective and constructive manner. The licensee's critique addressed numerous substantive deficiencies to be included in a licensee corrective action program and numerous improvement items. Overall, the conduct of these critiques was consistent with the regulatory requirements and guidelines cited above and considered a program strength. Licensee action on identified findings will be reviewed during subsequent NRC inspections.

No violations or deviations were identified.

15. Licensee Actions on Previous Inspection Findings (92701)

(Closed) Exercise Weakness 50-302/91-08-01: Emergency Coordinator failed to recommend PARs associated with plant conditions as specified in licensee procedures. The inspector reviewed the licensee's response to the violation, dated August 16, 1991, and verified that the corrective actions proposed in the response had been completed as described. This item was closed.

16. Exit Interview

The inspection scope and results were summarized on November 6, 1992 with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the exercise weaknesses listed below. No dissenting comments were received from the licensee. Proprietary information is not contained in this report.

<u>Item Number</u>	<u>Description/Reference</u>
50-302/92-26-01	IFI - Review licensee emergency procedures for guidance on downgrading

emergency classifications and entering initial recovery phase of emergencies (Paragraph 6).

50-302/92-26-02

EW - Failure to provide clear, accurate and timely messages to the State and local agencies (Paragraph 7).

50-302/92-26-03

EW - Failure to demonstrate reasonable accident assessments, relative to the projection of offsite dose rates, with known plant conditions.

Attachment (12 pages):
Scope, Objectives, Narrative
Summary, and Scenario Timeline

EXERCISE OBJECTIVES

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.
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.
4. Demonstrate that Areas Requiring Corrective Action observed in the 1991 Exercise have been corrected.

OPERATIONS OBJECTIVES (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 Nuclear Regulatory Commission.
4. Demonstrate an effective turnover of Emergency Coordinator responsibilities between the Shift Supervisor and the Director, Nuclear Plant Operations or Man-On-Call.

ON-SITE EMERGENCY RESPONSE ORGANIZATION OBJECTIVES

1. Demonstrate effective implementation of EM-206, "Emergency Plan Roster and Notification".
2. Demonstrate site (Protected Area) evacuation and provisions to warn all personnel within the Owner Controlled Area.
3. Demonstrate accident assessment and mitigation capabilities in the Technical Support Center (TSC).
4. Demonstrate adequate management and control of on-site emergency response capabilities.
5. Demonstrate an understanding of EAL's and proficiency in recognizing and classifying emergency conditions in the TSC.

6. Demonstrate the receipt and analysis of all field monitoring data and coordination of those results with non-FPC agencies at the Emergency Operations Facility (EOF).
7. Demonstrate an effective transfer of notification responsibilities from the Emergency Coordinator to the EOF Director when the Emergency Operations Facility is activated.
8. Demonstrate the effectiveness and control of the Emergency Repair Team.
9. Demonstrate the effectiveness and control of the Medical Emergency Team.
10. Demonstrate the effectiveness and control of the Plant Fire Brigade.
11. Demonstrate the effectiveness and control of the Emergency Sample Team (samples will be simulated).
12. Demonstrate the effectiveness and control of the Radiation Monitoring Team.
13. Demonstrate provisions and decision-making capability for utilization of evacuation routes.

CORPORATE EMERGENCY RESPONSE ORGANIZATION OBJECTIVES

1. Demonstrate effective implementation of REP-02, "Activation and Notification of the Corporate Emergency Response Organization".
2. Demonstrate the ability to establish and maintain appropriate communications with State and Federal emergency management representatives including the recommendation of protective actions.

RADIOLOGICAL CONTROL OBJECTIVES

1. Demonstrate the ability to perform radiological monitoring and assessment in the plant and site environs.
2. Demonstrate effective estimation and assessment of a (simulated) release of airborne radioactivity to the environment.
3. Demonstrate the ability to provide the Emergency Coordinator and the EOF Director, timely and sound emergency protective action recommendations.
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.
6. Demonstrate the capability of decontaminating relocated on-site personnel.

ENGINEERING OBJECTIVES

1. Demonstrate the capability of ascertaining the need for, and requisitioning, parts and components that will be used during recovery and corrective maintenance of damaged equipment.

SECURITY OBJECTIVES

1. Demonstrate the ability to perform accountability on-site (Protected Area) within 30 minutes of a site evacuation.
2. Demonstrate the capability of maintaining on-site security throughout an emergency at CR-3, including the capability of establishing and enforcing access control points.

INFORMATION SERVICES OBJECTIVES

1. Demonstrate timely activation of the Emergency News Center.
2. Demonstrate the ability to obtain emergency related information.
3. Demonstrate the ability to disseminate timely, accurate, and appropriate emergency information.
4. Demonstrate the ability to coordinate the release of emergency related information with State and County Public Information Officers.

1992 RADIOLOGICAL EMERGENCY RESPONSE PLAN EXERCISE
NARRATIVE SUMMARY

Initial Conditions:

- The unit has been operating at full power for 3 months.
- Primary to secondary leak rate is about three times normal (0.01 gpm in A-OTSG).
- A radwaste shipment carrying drums of compacted waste is exiting the protected area.

- 0700 The Initial Conditions are given to the Simulator Control Room operators.
- 0720 The Simulator Control Room receives a telephoned bomb threat stating that a bomb has been planted in the Nuclear Administration Building. No other details are known at this time.
- 0725 The AC Lube Oil Recirc Pump motor seizes/shorts causing oil to spray into the "B" Diesel Room and to ignite.
- 0726 The Simulator Control Room receives a fire alarm from the Emergency Diesel Generator Engine Room and sends an ANO to investigate.
- 0727 The Simulator Control Room receives verification of a Fire Pump Start and an alarm that the sprinkler system in the diesel has actuated.
- 0728 The ANO confirms that there is a fire in the "B" Diesel Generator Room. The Fire Brigade is dispatched to the scene.
- 0733 A fire brigade member hurrying to respond to the fire trips and falls down the stairs beside the elevator on the 119' elevation of the Auxiliary Building.
- 0735 The Assistant Shift Supervisor reports that there has been one injury and that an ambulance is required. The MET is dispatched to the scene and Citrus EMS is notified via 911. (SIMULATED)
- 0738 An ALERT is declared based on a fire lasting greater than 10 minutes. TSC staffing is initiated and in-shop accountability begins.
- 0747 The ambulance arrives on-site. (SIMULATED)
- 0800 The Assistant Shift Supervisor reports that the fire is out and that the governor motor and wires are burnt. The Diesel Lube Oil Recirc Pump and motor are also damaged. The "B" EDG is declared inoperable and the plant enters a 72 hour action statement.
- 0808 The TSC is declared operational.
- 0815 The Simulator Control Room receives a second bomb threat call.

- 0820 The ambulance exits the protected area (simulated).
- 0830 An eroded tube in A-OTSG fails and begins leaking at 75 gpm.
- 0831 Plant shutdown begins by procedure.
- 0833 Feedwater Booster Pump 1A Shaft seizes and the pump is lost due to overcurrent. The reactor trips at about 90% power causing the tube leak to increase to 250 gpm. All main steam safety valves and atmospheric reliefs vent momentarily initiating an unmonitored environmental release. When the valves reseal, one valve (MSV-33) fails slightly open allowing the release to continue.
- 0838 A SITE AREA EMERGENCY is declared based on an OTSG leak greater than 200 gpm. EOF activation begins.
- 0839 A Nuclear Auxiliary Operator is dispatched to pop the safety valve. This has no effect.
- 0853 While exiting the Security Building during the site evacuation, two workers who had been in the Auxiliary Building, are found to be contaminated.
- 0858 A repair team is dispatched from the TSC to repair the leaking main steam safety valve.
- 0905 Corporate Security is notified that a suspect responsible for the bomb threats has been apprehended. It has been determined that the threats were a hoax.
- 0933 The EOF is declared operational
- 1010 The repair team installs a gag on the leaking safety valve stopping the unmonitored release. However a lower level release continues through the condenser and the Auxiliary Building vent. While exiting the Intermediate Building, one of the ERT members (wearing SCBA) passes out. The EC is notified and the MET is dispatched.
- 1025 The MET reports that the ERT member was overheated and is now conscious. He is being returned to the TSC.
- 1030 A report is received from the Florida Highway Patrol (FHP) that the radwaste truck has been involved in an accident. After exiting the protected area this morning, the driver stopped for breakfast and then took a short nap in his sleeper cab. While traveling north on US 19 in Levy County, a cement truck ran a stop sign striking the semi-trailer broadside causing it to jack-knife and flip onto its side. The doors of one of the sea/land containers came open and some of its contents spilled. The FHP confirms that one of the investigating officers has a meter and has detected radioactive materials strewn along the roadway. Immediate assistance is requested.

- 1041 The Exhaust Trunk Expansion Joint on the "A" Feedwater Pump Turbine cracks causing the Simulator Control Room to receive a Condenser Vacuum Low alarm. A one-inch per minute vacuum leak decreases condenser vacuum until the Backup Air Removal Pumps auto start.
- 1051 The Turbine Building Operator reports the location of the vacuum leak to the Simulator Control Room.
- 1056 A repair team from the TSC is dispatched to the Feedwater Pump.
- 1115 While in the recirc mode, Air Handling Fan - 62 (AHF-62) trips due to a blown fuse and causes the failure of the TSC ventilation.
- 1136 Repairs to the feedwater expansion joint are completed.
- 1233 A leaking Cardox Valve is observed at the Cardox Tank on 119' elevation of the Turbine Building, the Simulator Control Room is notified.
- 1253 A repair team from the TSC is dispatched to the leaking Cardox valve.
- 1335 The Cardox valve is repaired.
- 1400 RM-A12 begins to respond erratically, failing low and then returning upscale.
- 1415 An I&C repair team from the TSC is dispatched to RM-A12.
- 1445 The Exercise is terminated.

1992 RERP EXERCISE TIME LINE

