



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 REGION II  
 101 MARIETTA STREET, N.W.  
 ATLANTA, GEORGIA 30303

JUL 20 1984

Report Nos.: 50-269/84-14, 50-270/84-13, and 50-287/84-16

Licensee: Duke Power Company  
 422 South Church Street  
 Charlotte, NC 28242

Docket Nos.: 50-269, 50-270, and 50-287

License Nos.: DPR-38, DPR-47, and DPR-55

Facility Name: Oconee 1, 2, and 3

Inspection Dates: June 19-21, 1984

Inspection at Oconee site near Seneca, South Carolina

Inspectors: T. R. Decker 6/30/84  
 T. R. Decker Date Signed

W. W. Stansberry 7/3/84  
 W. W. Stansberry Date Signed

Accompanying Personnel: D. B. Stockton, L. H. Munson, L. F. Munson, and  
 G. Stoetzel

Approved by: W. E. Cline 7/6/84  
 W. E. Cline, Section Chief Date Signed  
 Emergency Preparedness Section  
 Division of Radiation Safety and Safeguards

SUMMARY

Areas Inspected

This routine unannounced inspection involved 168 inspector-hours on site in the area of an emergency preparedness exercise.

Results

In the area inspected, no violations or deviations were identified.

## REPORT DETAILS

## 1. Persons Contacted

## Licensee Employees

- \*M. Tuckman, Station Manager
- \*C. Jennings, Emergency Preparedness Coordinator
- \*T. Mathews, Compliance
- \*J. McIntosh, Station Services
- \*J. Pope, Operations
- \*C. Youngue, Health Physics
- \*S. Coy, Health Physics
- \*R. Bond, Compliance
- \*D. DuBose, Visitor Center/Corporate Communications
- \*R. Harris, Nuclear Technical Services, (Corporate)
- \*T. King, Station Services
- \*F. Owens, Operations

Other licensee employees contacted included technicians, operators, mechanics, security force members, and office personnel.

## Other Organizations

- \*D. Evett, Director, Pickens County Emergency Preparedness
- \*W. Purcell, Director, Oconee County Emergency Preparedness

## NRC Resident Inspectors

- \*J. C. Bryant
- \*M. K. Sasser

\*Attended exit interview

## 2. Exit Interview

The inspection scope and findings were summarized on June 21, 1984, with those persons indicated in paragraph 1 above.

## 3. Licensee Action on Previous Enforcement Matters

Not inspected.

## 4. Unresolved Items

Unresolved items were not identified during this inspection.

## 5. Exercise Scenario

The scenario for this small scale 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

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 on June 13, 1984.

The scenario developed for this exercise was adequate to exercise the onsite emergency organizations of the licensee and provided sufficient emergency information to the local government agencies for their limited participation in the exercise. There were sufficient controllers to adequately support the exercise. The inspector had no further questions in this area.

No violations or deviations were identified.

#### 6. Assignment of Responsibility

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

The inspectors verified that the licensee has made specific assignments to the emergency organization. The inspectors observed the activation, staffing and operation of the emergency organization in the Control Room, TSC, and OSC. At each of these centers, the assignment of responsibility and staffing appeared to be consistent with the licensee's approved procedures. The inspectors had no further questions in this area.

No violations or deviations were identified

#### 7. Onsite Emergency Organization

The licensee's onsite emergency organization was observed to determine that the responsibilities for emergency response are unambiguously defined, that adequate staffing is provided to insure initial facility accident response in key functional areas at all times, and that the interfaces are 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 inspectors observed that the initial onsite emergency organization was well defined and that adequate staff was available to fill key functional positions within the emergency organization. The on duty shift Supervisor assumed the duties of Emergency Coordinator promptly upon the initiation of the simulated emergency and directed the response until relieved by the Station Manager. The inspectors had no further questions in this area.

No violations or deviations were identified

#### 8. Emergency Response Support and Resources

This area was observed to determine that arrangements for requesting and effectively using assistance resources have been made and that organizations

capable of augmenting the planned response have been identified as required by 10 CFR 50.47(b)(3), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.C.

This small scale exercise involved limited support in that the only local participation was provided by Oconee and Pickins Counties. Fire fighting and emergency medical support was observed. Two local volunteer fire departments responded promptly to the site to support the licensee's fire brigade. Medical support is discussed in paragraph 17. The inspectors had no further questions in this area.

No violations or deviations were identified.

#### 9. Emergency Classification System

This area was observed to determine that a standard emergency classification and action level scheme is 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.

An inspector observed that the emergency classification system was in effect as stated in the Radiological Emergency Plan and in the Implementing Procedures. The system appeared to be adequate for the initial classification of the simulated accident and for subsequent classification based on changing conditions. The inspectors had no further questions in this area.

No violations or deviations were identified

#### 10. Notification Methods and Procedures

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

An inspector observed that notification methods and procedures had been established and were used to provide information concerning the simulated emergency conditions to local response organizations and to alert the licensee's augmented emergency response organization. New message forms which provide appropriate information to State and local governments have been printed. These forms provide an approval space for the Emergency Coordinators signature. Implementing procedures have been revised to require the Emergency Coordinator's approval on communications prior to release to the State and local participants. Based on the above finding the inspector had no further questions in this area.

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. The inspectors had no further questions in this area.

No violations or deviations were identified.

#### 11. Emergency Communications

This area was observed to determine that provisions exist 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.

Communications among the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organization and local offsite authorities were improved over the previous exercise. Officials were promptly and accurately notified. Only the health physics staff lacked a dedicated communicator in the OSC. Radio communication techniques used by the offsite monitoring teams were observed. Radio communication was limited to necessary messages. Call signs, team names and code signals were used correctly.

No violations or deviations were identified.

#### 12. Public Education and Information

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 50.47(b)(7), 10 CFR 50, Appendix E, paragraph IV.D, and specific criteria in NUREG 0654, Section II.G.

The Emergency News Center was not activated for this small scale exercise and therefore could not be evaluated. 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. The inspector had no further questions in this area.

No violations or deviations were identified.

#### 13. Emergency Facilities and Equipment

This area was observed to determine that adequate emergency facilities and equipment to support an emergency response are 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 inspectors observed the activation, staffing and operation of selected emergency response facilities and evaluated equipment provided for emergency use during the exercise.

- a. Control Room - An inspector observed that control room personnel acted promptly to initiate emergency response to the simulated emergency.

Emergency procedures were readily available and the response was effective. The inspector had no further questions in this area.

- b. Technical Support Center (TSC) - The TSC was activated and staffed promptly upon notification by the Emergency Coordinator of the simulated emergency conditions. The TSC staff appeared to be knowledgeable concerning their emergency responsibilities and TSC operations proceeded smoothly. The noise level could be improved and may contribute to fatigue if endured for long periods of time. The TSC appeared to have adequate equipment for the support of the assigned staff. The inspectors had no further questions in this area.
- c. Operations Support Center (OSC) - The OSC was staffed promptly upon activation by the Emergency Coordinator. An inspector observed that teams were formed promptly, briefed and dispatched efficiently. The inspectors had no further questions in this area.
- d. Crisis Management Center (CMC) - Based on a previously granted exemption, this facility was not required to be activated during this exercise.

No violations or deviations were identified.

#### 14. Accident Assessment

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 are in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, paragraph IV.B, and specific criteria in NUREG 0654, Section II.I.

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

The licensee provided dose projections based on monitored release pathways as well as plant conditions. Manual dose calculation procedures were used since the new computer capability is not fully functional. Real time meteorological data was provided by the Operational Aid computer in the Control Room.

No violations or deviations were identified.

#### 15. Protective Responses

This area was observed to determine that guidelines for protective actions during the emergency, consistent with Federal guidance, are developed and in place, and protective actions for emergency workers, including evacuation of

nonessential personnel are implemented promptly as required by 10 CFR 50.47(b)(10), and specific criteria in NUREG 0654, Section II.J.

An inspector verified the licensee had used emergency procedures for formulating protective action recommendations for offsite populations within the 10 mile EPZ. The licensee's protective action recommendations were consistent with federal guidance in NUREG 0654 and notifications were made to the appropriate State and local authorities within the 15 minute criteria. The inspector had no further questions in this area.

No violations or deviations were identified.

#### 16. Radiological Exposure Control

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

The inspector noted no use of plant diagrams on other types of status boards displaying inplant radiation levels in either the TSC or OSC. Health physics technicians accompanying damage control teams had to "relearn" radiological conditions each time teams were sent out. In at least one instance, this contributed to a substantial loss of timely response (greater than two and a half hours to get a team dressed out). Similarly, no effort was made by either the environmental monitoring team or environmental director to select paths of travel that were out of the plume. It was observed that the environmental monitoring team returned to the plant via a route near the center of the plume. The area of emergency worker radiological protection is an inspector followup item and will be inspected on a future exercise (269/84-14-01, 270/84-13-01, 287/84-16-01).

No violations or deviations were identified.

#### 17. Medical and Public Health Support

This area was observed to determine that arrangements are made for medical services for contaminated injured individuals as required by 10 CFR 50.47(b)(12), 10 CFR 50, Appendix E, paragraph IV.E, and specific criteria in NUREG 0654, Section II.L.

An inspector observed the emergency medical rescue activities at the accident scene, transport of the victims from the scene to the Oconee Memorial Hospital and treatment by the staff at the hospital. Since the previous exercise, the Oconee hospital staff reported having received additional training from the licensee and although there was still considerable concern for contamination control, medical needs were not neglected. The response to the simulated medical emergency was timely and

security procedures to support the drill were adequate. The inspector had no further questions in this area.

#### 18. Exercise Critique

The licensee's critique of the emergency exercise was observed to determine that deficiencies identified as a result of the exercise and 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.E, and specific criteria in NUREG 0654, Section II.N.

The exercise critique was conducted shortly after the conclusion of the exercise. Licensee management, key exercise participants and NRC representatives were present. The licensee discussed areas of the exercise in which items for possible improvement were identified. The inspectors determined that the critique was comprehensive and adequately addressed weaknesses identified in the licensee's emergency response program during this exercise.

#### 19. Inspection Followup (92701)

- a. (Closed) Inspector Followup Item (IFI) 260, 270, 287/83-10-01: committing more controllers to the next exercise and submitting the controller package 30 days in advance. The inspector noted that there were sufficient controllers to support the exercise and that the controller package was submitted as requested.
- b. (Closed) IFI 269, 270, 287/83-10-02: providing an approval space on all communications forms at all locations. The inspector noted that the message forms provide an approval space for the Emergency Coordinator's signature.
- c. (Closed) IFI 269, 270, 287/83-10-03: improving communications among the emergency response facilities. The inspector observed that the communications among the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organization and local offsite authorities were acceptable.
- d. (Closed) IFI 269, 270, 287/83-08-09: instruct field team members in radio technique and message verification. The inspector observed that proper radio procedures were used by the field teams during the exercise.
- e. (Closed) IFI 269, 270, 287/83-27-01: augment transient notification procedure. The inspector noted that the 1984 edition of the Ocone Nuclear Station Emergency Plan public information brochure specifies AM, and FM radio station call letters and TV channel numbers.



Further, approximately sixteen boat landings on the adjoining lakes have been posted with appropriate signs. Further, according to licensee representatives, stickers displaying emergency information have been distributed to at least fifty-six locations within the EPZ.

- f. (Closed) IFI 269, 270, 287/83-10-05: consider an expanded scale recorder for the delta T recorder. The inspector noted that the Operational Aid computer provided temperature data to the nearest 0.05 degrees F.
- g. (Open) IFI 269, 270, 287/83-10-06: providing additional training for health physicists who do offsite monitoring. The inspector observing the offsite monitoring teams noted that the dosimeters issued for the exercise were not checked, samples were handled without gloves and the KI tablets issued to the team for consumption were also handled without checking or washing the potentially contaminated hands.
- h. (Closed) IFI 269, 270, 287/83-10-08; providing some basic training to the Oconee hospital staff. The Oconee hospital staff reported that additional training had been received. The inspector observed that the hospital staff's performance was acceptable.
- i. (Closed) IFI 269, 270, 287/83-10-09: considering the implementation of emergency security procedures during exercises. The inspector observed that the security procedures to support the drill in this area were adequate.
- j. (Closed) IFI 26, 270, 287/81-13-23: procedures to analyze high level primary coolant samples as per NUREG-0737 (K9J92.5). Procedures containing interim methods for analyzing high level primary coolant samples in accordance with NUREG-0737 guidelines were reviewed. The procedures discussed provisions for: calibrating equipment; diluting the sample; protecting laboratory personnel including dose limits, health physics coverage requirement, shielding, remote handling, and storage of samples until ultimate disposal is determined. The procedural provisions for the interim systems appeared to be adequate.