



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

Report Nos.: 50-424/91-04 and 50-425/91-04

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

Docket Nos.: 50-424 and 50-425

License Nos.: NPF-68 and NPF-81

Facility Name: Vogtle 1 and 2

Inspection Conducted: February 18-22, 1991

Inspector:

A. Gooden

03-19-91

Date Signed

Approved by:

for

W. Rankin, Chief

Emergency Preparedness Section

Radiological Protection and Emergency

Preparedness Branch

Division of Radiation Safety and Safeguards

03-20-91

Date Signed

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the area of emergency preparedness. Several programmatic areas were reviewed to determine if the program was being maintained in a state of operational readiness. Areas examined included: training, independent audits, key program changes (organizational, equipment, and procedurally), administrative controls governing distribution of changes to the Emergency Plan and Implementing Procedures (EPiPs), the corrective action tracking system, observation and evaluation of a simulator drill involving event classification, and an off-hours communications drill.

Results:

Within the areas examined, a violation was identified for failure to maintain the Emergency Operations Facility (EOF) ventilation system in accordance with Section H.1.3 of the Vogtle Emergency Plan (Paragraph 3). The licensee had incorporated lessons learned from the March 20, 1990, loss of Vital AC Power event (Site Area Emergency declaration) into appropriate emergency response training. Noted program strengths included an effective and timely response by the Control Room staff during the communications drill; upgrades to emergency communications equipment; and prompt actions taken to resolve commitments in response to the March 20, 1990 event.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

A. Anderson, Shift Clerk
*H. Beacher, Senior Engineer
R. Brown, Plant Instructor, Nuclear
*P. Burwinkel, Plant Engineering Supervisor
B. Carter, Shift Superintendent
*S. Chesnut, Manager, Technical Support
*M. Hobbs, Instrumentation and Control Superintendent
*K. Holmes, Manager, Training and Emergency Preparedness
*M. Horton, Manager, Engineering Support
*W. Kitchens, Assistant General Manager, Operations
*I. Kochery, Health Physics Superintendent
*L. Mayo, Nuclear Specialist I
*G. McCarley, Independent Safety Engineering Group Supervisor
*T. McQuillen, Acting Security Manager
*J. Roberts, Emergency Preparedness Coordinator
*C. Stinespring, Manager, Plant Administration
*J. Swartzwelder, Manager, Outages and Planning
C. Williams, Shift Superintendent
*J. Williams, Supervisor, Work Planning and Controls

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

NRC Resident Inspector

*P. Balmain

*Attended exit interview

2. Emergency Plan and Implementing Procedures (82701)

Pursuant to 10 CFR 50.47(b)(16), 10 CFR 50.54(q), and Appendix E to 10 CFR Part 50, this area was reviewed to determine whether changes were made to the program since the last routine inspection (July 1990), and to assess the impact of these changes on the overall state of emergency preparedness at the facility.

The inspector reviewed the licensee's administrative program for making changes to the Plan and EPIPs. The inspector conducted a random sampling of changes to the Plan and procedures to verify that changes were reviewed and approved by management in accordance with procedures governing the development, review, and approval. Documentation for EPIP changes was

reviewed to verify that submittals were made to the NRC within 30 days of the approval date. No problems were noted. Since the last inspection, changes incorporated as Revisions 12 and 13 were submitted for NRC review and approval. By letter dated October 23, 1990, the licensee was informed that certain changes were considered inconsistent with the planning guidance and requirements. The licensee responded by letter dated December 21, 1990, providing additional details and justification for proposed changes. At the time of the inspection, the additional details and justification were being reviewed by the Regional Office and NRC Headquarters. Controlled copies of the Emergency Plan, EIPs, and/or position notebooks (e.g. Emergency Director) were audited in the Control Room, Technical Support Center (TSC), Operations Support Center (OSC), Vogtle Simulator, and the EOF. The selected documents were all current and up to date. In response to past findings involving outdated procedures (both licensee and NRC identified), the licensee had implemented the following corrective actions: (1) a member of the Document Control staff was assigned the sole responsibility of maintaining current and up to date all controlled copies of the Emergency Plan and EIPs stored in the emergency response facilities (ERFs); (2) the frequency of audits for ERF documents was increased to weekly; (3) following facility activations, all documents are inventoried; and (4) periodic independent audit of ERF documents by the emergency preparedness Staff to ensure documents are current and up to date. On a quarterly basis, the licensee reviewed and updated the Emergency Response Telephone Directory. The current copy of the directory dated January 15, 1991, was available in each of the ERFs.

No violations or deviations were identified.

3. Emergency Facilities, Equipment, Instrumentation, and Supplies (82701)

Pursuant to 10 CFR 50.47(b)(8) and (9), Section IV.E of Appendix E to 10 CFR Part 50, and Section H of the licensee's Emergency Plan, this area was inspected to determine whether the licensee's emergency response facilities and other essential emergency equipment, instrumentation, and supplies were maintained in a state of operational readiness.

The inspector toured the ERFs and noted that facilities were in accordance with the description in Section H of the Emergency Plan. Discussions were held with members of the emergency preparedness staff concerning modifications to facilities, equipment, and instrumentation since the last inspection. The discussion disclosed no facility or significant instrumentation changes. Regarding equipment changes, the licensee informed the inspector of upgrades that were made to the emergency communications equipment in light of the March 1990 Site Area Emergency declaration. The following actions had been taken:

- ° Battery back-up power provided for the Emergency Notification Network (ENN) in the Control Room.

- ° Burke County and Georgia Emergency Management Agency (GEMA) added to the back-up ENN communications system.
- ° A facsimile system (known as "Faxxchange") was installed which provided simultaneous transmission of the emergency notification to the offsite agencies.

In assessing the operational status of the emergency facilities, the inspector reviewed the periodic maintenance and testing of the TSC and EOF ventilation systems. The procedures governing the aforementioned tests were Procedure No. 54039-C "EOF Filtration System HEPA Filter Test," and Procedure No. 54031-C "Technical Support Center HVAC System Test." During the review of test documentation, the inspector noted that with one exception, the TSC HVAC surveillance procedure was performed satisfactorily. The one exception involved unsatisfactory results for Section 5.5 of the procedure regarding the HEPA Filters OP Test. The last complete surveillance test to meet the procedural acceptance criteria was completed during May 1988. The most recent test (discussed above) with unsatisfactory results was performed during October 1989. According to the licensee's surveillance tracking system, the test due date was scheduled for July 1990. However, due to inoperable equipment, the test had not been performed. The inspector was informed that the required equipment was received and testing would be completed by March 6, 1991. Following a discussion with the NRC Resident and members of the licensee's staff, it was agreed that the NRC Resident's Office would follow-up on the TSC HVAC surveillance and acceptance test.

Regarding the maintenance and testing of the EOF ventilation system, documentation was provided to show that the EOF HVAC system was not functioning properly. According to a maintenance work order (Control No. A9000236, dated February 15, 1990) and an interview with the System Engineer who performed the last surveillance, the EOF HVAC system was considered not functioning properly due to the following:

- ° The space pressurization controller produces no output and positive pressurization of the EOF does not occur.
- ° Maximum airflow achievable through AHU-7 is only about half the nominal design flow.
- ° The downstream isolation damper (for FH7-A) has a loosely attached actuator.

When questioned regarding the current status, the inspector was informed by the licensee representative that due to scheduling and receipt of required parts, the repairs had not been completed and the system's current state of operation would not provide positive pressurization of the EOF. According to Section H.1.3 of the Vogtle Emergency Plan, "the EOF is sealed and maintained at a positive pressure with respect to atmospheric pressure." The licensee was informed that failure to maintain

the EOF ventilation system in accordance with the Emergency Plan was a violation.

Violation (50-424, 425/91-04-01): Failure to maintain the EOF ventilation system in accordance with Section H.1.3 of the Emergency Plan.

The inspector verified that protective equipment and supplies were operational and inventoried on a periodic basis. Emergency Kits and/or cabinets from the TSC, OSC, EOF, and the offsite monitoring team were inventoried and randomly selected equipment was checked for operability. The selected equipment operated properly, displayed current calibration stickers, and a successful battery and source check was obtained. During the facilities tour, the inspector verified the operability of the Emergency Notification System (ENS) by conducting a communications test with the NRC Operations Center. The back-up communications system for the offsite local emergency management agency (Burke County Radio) was also tested. No problems were noted.

By review of applicable procedures and check-list documentation covering the period July 1990 to January 1991, the inspector determined that emergency equipment (e.g., communication, ERF computers, and emergency kits) was being checked in accordance with the procedures governing such tests. Records reviewed indicated that all discrepancies or problems identified during inventories and test were corrected in a timely manner. The licensee's management control program for the prompt Alert and Notification System (ANS) was reviewed. According to a discussion with a licensee representative, the current system consist of 47 sirens (46 located in Georgia and 1 siren in South Carolina) and tone-alert radios. The licensee provided a siren operability report dated February 5, 1991, which detailed the calendar year 1990 siren operability as 98.6 percent. Further, the inspector reviewed siren test documentation which showed that the tests were conducted at the frequency specified in Appendix 3 of the Vogtle Emergency Plan. Documentation showed that as part of the annual drill conducted August 1, 1990, a full-cycle siren test and activation of the tone-alert radios were performed.

One violation was identified.

4. Organization and Management Control (82701)

Pursuant to 10 CFR 50.47(b)(1) and (16), Section IV.A of Appendix E to 10 CFR Part 50, and Section B of the licensee's Emergency Plan, this area was inspected to determine the effects of any changes in the licensee's emergency organization and/or management control systems on the emergency preparedness program, and to verify that any such changes were properly factored into the Emergency Plan and EIPs.

The inspector was informed by a member of the licensee's staff that several administrative changes had been made since the last inspection to the normal organization which resulted in changes to the emergency organization as a result of reassignment or promotion. When training

records were compared to position assignment, no problems were noted. Regarding the offsite agencies, a significant administrative change had occurred within the Georgia Emergency Management Agency (GEMA) as a result of a reappointment within the State operations. This change does not appear to impact the normal interface and contact regarding emergency planning.

No violations or deviations were identified.

5. Training (82701)

Pursuant to 10 CFR 50.47(b)(15), Section IV.F of Appendix E to 10 CFR Part 50, and Section O of the licensee's Emergency Plan, this area was inspected to determine whether the licensee's key emergency response personnel were properly trained and understood their emergency responsibilities.

The inspector reviewed Section O of the Emergency Plan and EPIP 91601-C for a description of the training program and procedures. In addition, selected lesson plans were reviewed and personnel with the responsibility for tracking training were interviewed. According to a licensee representative, periodic training reviews are performed for verification that emergency response personnel training is current and up to date. The results of the review are compiled in a monthly status report that is provided to appropriate management for review and/or follow-up actions.

The inspector observed a licensee-conducted simulator exercise in lieu of conducting walkthrough evaluations. A cognizant member of the licensee's staff informed the inspector that the scenario details for the drill were confidential and unrehearsed. Included as objectives were:

- ° Accident assessment and classification
- ° Overall management of the accident by the Shift Superintendent
- ° Plant operations in accordance with Technical Specifications (TS)
- ° Familiarity with procedures (Abnormal, Annunciator, EPIPs, etc.)
- ° Timely and accurate documentation, and completion, of the emergency notification message form

Participants included an entire shift crew for the Control Room (Shift Superintendent, Shift Supervisor, Shift Technical Advisor, Operators, etc.). Personnel demonstrated familiarity with the use of procedures, TS requirements, use of plant monitoring systems in accident recognition and assessment, and overall management of the accident. The event classification was in accordance with the procedures. The plant casualty involved a loss of coolant and steam generator tube rupture which resulted in a Site Area Emergency declaration. Notification message forms were completed in a timely and accurate manner. Although actual notifications were not demonstrated or simulated, the Shift Superintendent was very familiar with the time requirements for notification, the revised notification procedure (i.e., voice and facsimile transmission of notification), and the various systems that were available for offsite

notifications (including the Faxxchange). When questioned regarding protective action recommendations (PARs) following the event declaration, the interviewee was prompt in locating the procedural guidance for the Site Area Emergency declaration. No problems were noted. One issue was discussed regarding the documentation of event and reporting times. The notification form requires that all times be reported in Eastern; however, the Control Room and Simulator Control Room clocks indicate Central Time. The interviewee acknowledged this difference in time has resulted in confusion on the part of Control Room staff for maintaining time-line during events. This confusion was further noted during an unannounced communications drill (conducted during back shift operations) observed by the licensee and NRC inspector during the pre-dawn hours of February 21, 1991. With one exception, the Control Room staff and security personnel responding to the communications drill were timely and effective in performing their roles and responsibilities. The exception involved the use of Central Time as compared to Eastern Time by the Offsite Communicator in event reporting. A licensee observer discussed with the communicator during the critique the discrepancy in using Central Time rather than Eastern. According to an interviewee, the licensee's corporate office is reviewing the systemwide applicability of using Eastern Time rather than Central.

Training records were reviewed for 17 randomly selected members of the emergency organization. No problems were noted when personnel training records were compared with position assignments and required training modules. Offsite support agency training was reviewed for fire, rescue, hospital, and governmental support agencies. No problems were noted; training was consistent with the Emergency Plan and EPIP 91601-C "Emergency Preparedness Training." In addition to the aforementioned training reviews, an earlier NRC inspection (Report Nos. 50-424, 425/90-29, dated December 24, 1990) also detailed emergency response training in light of the March 20, 1990, loss of vital AC power event. The inspection disclosed that training provided in response to commitments from the March 1990 incident was adequately addressed. The inspector verified that health physics drills were being conducted at the frequency specified in the Emergency Plan (semi-annual). According to documentation, health physics drills were conducted on February 2, 1990 and August 1, 1990.

Regarding augmentation drills, a licensee contact provided documentation to show the results of an off-hours facility activation drill conducted on January 10, 1991. Drill objectives included accident assessment and classification, notifications/personnel recall, and accountability. The inspector was informed that although the date of the drill was announced, employees were not provided the drill starting time. According to documentation and discussions with members of the licensee's staff, the majority of the augmentation staff site arrival time was approximately 60 minutes. However, facility activation times exceeded 60 minutes from the Alert declaration. The inspector discussed with the licensee contact actions taken or planned to enhance augmentation time (procedural, equipment, etc.). The inspector was informed that prioritization of the

notification list and assignment of personnel to the organization based on the proximity of an individual's residence to the plant had been completed, and any further actions were pending the NRC review of proposed changes incorporated as Revision 13 to the Vogtle Emergency Plan. During the discussion regarding facility activation drills, the inspector questioned members of the licensee's staff regarding a drill demonstrating the activation and operation of the back-up EOF (BEOF). According to licensee contacts, although an activation drill had not been performed, the EOF support staff were provided a tour of the BEOF for purposes of familiarization and assessment of equipment/supply needs. In response to the discussion, the licensee issued an open item tracking system (OITS) commitment No. 21235 to conduct an emergency drill which requires relocation to the BEOF. This item is being tracked by the licensee's OITS for performance by the end of October 1992.

No violations or deviations were identified.

6. Independent Review/Audits (82701)

Pursuant to 10 CFR 50.47(b)(14) and 10 CFR 50.54(t), this area was inspected to determine whether the licensee had performed an independent review or audit of the emergency preparedness program, and whether the licensee had a corrective action system for deficiencies and weaknesses identified during exercise and drills.

According to documentation, an independent audit was conducted by the Safety Audit and Engineering Review (SAER) Department during the period May 31 through June 21, 1990, and documented in Audit Report No. OP12-SC/27 (VSAER-90-162), dated July 6, 1990. This audit was previously reviewed by an NRC inspector and documented in NRC Inspection Report Nos. 50-424,425/90-16, dated July 26, 1990. An audit of the offsite portion of the Vogtle Emergency Preparedness Program was conducted during the period May 7 through June 8, 1990, and documented in Audit Report No. 90-4 (SAER-000148), dated June 22, 1990. No problems were noted with the offsite interface in Georgia or South Carolina. Documentation was available to show that two audit findings were identified and assigned for review and corrective action. Documentation dated June 27, 1990 was reviewed to show that the 50.54(t) evaluation involving offsite interface was provided to State and local government officials. The calendar year 1991 50.54(t) audit had not been performed at the time of the inspection.

The licensee's program for follow-up action on audits, drills, and exercise findings was reviewed. The exercise and drill findings were being tracked via a system known as the "Open Items Tracking System." A review of the OITS print out indicated that the exercise items identified during the 1990 exercise critique were being tracked for resolution.

No violations or deviations were identified.

7. Action on Previous Inspection Findings (92701)

- a. (Closed) Violation 50-424/90-15-01, 50-425/90-15-01: Failure to distribute and maintain current Emergency Plan and EPIPs.

Controlled copies of the Emergency Plan, EPIPs, and/or position notebooks (e.g., OSC Manager) were audited in the Control Room, TSC, OSC, and EOF. No problems were noted. Selected documents were current and up-to-date.

- b. (Closed) Violation 50-424/90-16-01, 50-425/90-16-01: Failure to make the required 15-minute initial notifications following the declaration of a Site Area Emergency.

The inspector reviewed documentation that disclosed the licensee had taken corrective actions in accordance with the commitments discussed during the enforcement conference held on September 5, 1990. Actions included provision of back-up power to the primary and back-up ENN; training for emergency personnel regarding communications/notifications; installation and implementation of facsimile capability (Faxxchange) for providing simultaneous transmission of the emergency notification message to offsite agencies; procedural revision to prioritize the notification sequence, etc.

8. Exit Interview

The inspection scope and results were summarized on February 22, 1991, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. Proprietary information is not contained in this report. No dissenting comments were expressed by the licensee. A member of the licensee's staff anticipated that the problem with the EOF ventilation system would be resolved during early March 1991.

<u>Item Number</u>	<u>Description/Reference</u>
50-424, 425/91-04-01	Violation - Failure to maintain the EOF ventilation system in accordance with Section H.1.3 of the Vogtle Emergency Plan (Paragraph 3).

Licensee management was informed that two previous inspection findings were reviewed and are considered closed (Paragraph 7).