



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

FEB 20 1985

Report Nos.: 50-369/85-02 and 50-370/85-02

Licensee: Duke Power Company
422 South Church Street
Charlotte, NC 28212

Docket Nos.: 50-369 and 50-370

License Nos.: NPF-9 and NPF-17

Facility Name: McGuire Nuclear Station

Inspection Conducted: January 7 - 11, 1984

Inspector:

J. L. Kreh
J. L. Kreh

2-6-85

Date Signed

Accompanying Personnel: W. V. Thomas (Battelle Pacific Northwest Laboratories)

Approved by:

W. E. Cline
W. E. Cline, Chief
Emergency Preparedness Section
Division of Radiation Safety and Safeguards

02/06/85

Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 75 inspector-hours onsite and 1 inspector-hour offsite in the area of emergency preparedness.

Results: Violations - (1) failure to conduct an acceptable review of the emergency preparedness program; (2) failure to submit revised procedures to NRC within 30 days. No deviations.

8503210127 850220
PDR ADOCK 05000369
Q PDR

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *M. D. McIntosh, Station Manager
- *D. J. Rains, Superintendent of Maintenance
- *J. R. Leonard, Station Emergency Preparedness Coordinator
- *M. Brown, Station Services
- *C. M. Fish, Station Services
- *M. L. Hagee, Station Services
- *E. C. McCraw, Compliance Engineer
- T. E. Parker, Training Supervisor
- T. K. Beal, Administrative Support Supervisor, Operations
- L. W. Abernathy, Shift Supervisor
- G. R. Blake, Shift Supervisor
- J. H. Zelm, Shift Supervisor
- *R. E. Harris, Emergency Response Coordinator
- P. F. Carter, Director, Community Relations
- P. S. Osborne, Supervisor, Community Relations
- *J. M. Frye, QA Manager, Audit Division
- *J. A. Effinger, QA Supervisor, Audit Division
- L. G. Ernst, QA Specialist, Audit Division
- *R. Gill, Licensing Engineer (Corporate)

Other licensee employees contacted included technicians and administrative personnel.

Other Organizations

W. J. Root, Radiation Safety Officer, Charlotte Memorial Hospital and Medical Center

NRC Resident Inspectors

- *W. T. Orders
- *R. C. Pierson

*Attended exit interview

2. Exit Interview (30703)

The inspection scope and findings were summarized on January 11, 1985 with those persons indicated in paragraph 1 above. A violation described in paragraph 6 (failure to submit procedural revisions to NRC within 30 days) was discussed. The licensee took no exception to this finding. A violation described in paragraph 10 (failure to conduct an acceptable review of the emergency preparedness program) was discussed in detail. The licensee took

exception to this finding. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

3. Emergency Detection and Classification (82201)

Pursuant to 10 CFR 50.47(b)(4) and 10 CFR Part 50, Appendix E, Sections IV.B and IV.C, this program area was inspected to determine whether the licensee used and understood a standard emergency classification and action level scheme.

The inspector reviewed the licensee's classification procedures. The event classifications in the procedures were consistent with those required by regulation. The classification procedures did not appear to contain impediments or errors which could lead to incorrect or untimely classification.

Selected emergency action levels (EALS) specified in the classification procedures were reviewed. The reviewed EALS appeared to be consistent with the initiating events specified in Appendix 1 of NUREG-0354. The inspector noted that some of the EALS were based on parameters obtainable from Control Room instrumentation.

The inspector verified that the licensee's notification procedures included criteria for initiation of offsite notifications and for development of protective action recommendations. The notification procedures required that offsite notifications be made promptly after declaration of an emergency.

The inspector discussed with licensee representatives the coordination of EALS with State and local officials. Licensee documentation (lacking in the case of the State of North Carolina) showed that the licensee had discussed the EALS during June 1984 with State and local officials, and that these officials agreed with the EALS used by the licensee. The inspector verified, by means of a telephone conversation with a cognizant official of the State of North Carolina, that the State agreed with the licensee's EALS (see also paragraph 10).

Interviews were held with three Shift Supervisors to verify that they understood the relationship between core status and such core damage indicators as containment dome monitor, inadequate-core-cooling indicator, high-range effluent monitor, fuel temperature indicator, containment hydrogen monitor, vessel coolant level, and postaccident primary coolant analysis. All interviewees appeared knowledgeable of the various core damage indications and their relationship to core status.

The responsibility and authority for classification of emergency events and initiation of emergency action were prescribed in licensee procedures and in the Emergency Plan (EP). Interviews with selected key members of the licensee's emergency organization revealed that these personnel understood

their responsibilities and authorities in relation to accident classification, notification, and protective action recommendations.

Selected Emergency Operation Procedures (EOPs) were reviewed by the inspector and discussed with licensee personnel. The EOPs provided direction to users concerning timely classification of accidents. All personnel interviewed appeared to be familiar with the classification information in the EOPs.

Walk-through evaluations involving accident classification problems were conducted with three Shift Supervisors. All personnel interviewed promptly and properly classified the hypothetical accident situations presented to them, and appeared to be familiar with appropriate classification procedures.

No violations or deviations were identified in this program area.

4. Protective Action Decision-Making (82202)

Pursuant to 10 CFR 50.47(b)(9) and (10) and 10 CFR Part 50, Appendix E, Section IV.D.3, this area was inspected to determine whether the licensee had 24-hour-per-day capability to assess and analyze emergency conditions and make recommendations to protect the public and onsite workers, and whether offsite officials had the authority and capability to initiate prompt protective action for the public.

The inspector discussed responsibility and authority for protective action decision-making with licensee representatives and reviewed pertinent portions of the licensee's emergency plan and procedures. The plan and procedures clearly assigned responsibility and authority for accident assessment and protective action decision-making. Interviews with members of the licensee's emergency organization revealed that these personnel understood their authorities and responsibilities with respect to accident assessment and protective action decision-making.

Walk-through evaluations involving protective action decision-making were conducted with three shift supervisors. Personnel interviewed appeared to be cognizant of appropriate onsite protective measures and aware of the range of protective action recommendations appropriate to offsite protection. Personnel interviewed were aware of the need for timeliness in making initial protective action recommendations to offsite officials. Interviewees demonstrated adequate understanding of the requirement that protective action recommendations be based on core condition and containment status even if no release is in progress.

The capability of offsite officials to make protective action decisions and to promptly notify the public was discussed with licensee representatives. Licensee procedures made provisions for contacting responsible offsite authorities on a 24-hour basis. Backup communications links with offsite authorities were available. The inspector independently confirmed that offsite decision-makers with authority for emergency response activities

could be contacted by making a telephone call to the States of North Carolina and South Carolina from the Control Room.

The inspector discussed protective action decision-making by offsite agencies during a telephone conversation with senior emergency management representatives of the States of North Carolina and South Carolina. According to these officials, key State decision-makers had predetermined criteria for use in protective action decision-making which were consistent with those used by the licensee.

No violations or deviations were identified in this program area.

5. Notification and Communications (82203)

Pursuant to 10 CFR 50.47(b)(5) and (5) and 10 CFR Part 50, Appendix E, Section IV.D, this area was inspected to determine whether the licensee was maintaining a capability for notifying and communicating (in the event of an emergency) among its own personnel, offsite supporting agencies and authorities, and the population within the EPZ.

The inspector reviewed the licensee's notification procedures. The procedures were consistent with the emergency classification and EAL scheme used by the licensee. The inspector determined that the procedures made provisions for message verification.

The inspector determined by review of applicable procedures and by discussion with licensee representatives that adequate procedural means existed for alerting, notifying, and activating emergency response personnel. The procedures specified when to notify and activate the onsite emergency organization, corporate support organization, and offsite agencies. Selected telephone numbers listed in the licensee's procedures for emergency response support organizations were checked in order to determine whether the listed numbers were current and correct. No problems were noted.

The content of initial emergency messages was reviewed and discussed with licensee representatives. The initial messages appeared to meet the guidance of NUREG-0654, Sections II.E.3 and II.E.4. Licensee representatives stated that the format and content of the initial emergency messages had been reviewed by State and local government authorities.

The licensee's management control program for the prompt notification system was reviewed. According to licensee documentation and discussions with licensee representatives, the system consisted of 53 fixed sirens, local emergency-vehicle sirens and PA systems, the Emergency Broadcast System, and 75 tone-alert radios. A review of licensee records verified that the system as installed was consistent with the description contained in the Crisis Management Center emergency plan. Maintenance of the system had been provided for by the licensee. The inspector reviewed siren test records for the period January - December 1984. The records showed that silent tests were conducted every two weeks, growl tests quarterly, and a full-cycle test

annually as specified in NUREG-0654, Appendix 3. No offsite agency problems relating to the prompt notification system were disclosed during the inspection.

Communications equipment in the Control Room and TSC was inspected. Provisions existed for prompt communications among emergency response organizations, to emergency response personnel, and to the public. The installed communications systems at the emergency response facilities were consistent with system descriptions in the emergency plan and implementing procedures.

The inspector conducted operability checks on selected communications equipment in the Control Room, TSC, and one offsite monitoring vehicle. No problems were observed. The inspector reviewed licensee records for the period February 21, 1984 to December 20, 1984 which indicated that communications tests were conducted at the frequencies specified in NUREG-0654, Section II.N.2.a. Licensee records also revealed that corrective action was taken on problems identified during communications tests.

Redundancy of offsite and onsite communication links was discussed with licensee representatives. The inspector verified that the licensee had established a backup communications system. The backup system made use of Southern Bell Telephone land lines and a microwave-based selective signaling network. The inspector requested and observed an unannounced communications and notification check using the backup system. The inspector noted that the system operated properly and that the notification message used by the licensee representative followed the format prescribed in the licensee's procedures.

No violations or deviations were identified in this program area.

6. Changes to the Emergency Preparedness Program (82204)

Pursuant to 10 CFR 50.47(b)(16), 10 CFR 50.54(q), and 10 CFR Part 50, Appendix E, Sections IV and V, this area was reviewed to determine whether changes were made to the program since the last routine inspection (February 1984) and to note how any changes affected the overall state of emergency preparedness.

The inspector discussed the licensee's program for making changes to the emergency plan and implementing procedures. The inspector verified through documental surveys that changes to the plan and procedures were reviewed and approved by management. Perusal of licensee records disclosed that four Emergency Plan Implementing Procedures were issued to copyholders (including NRC) on September 12, 1984. By this date, the procedures were approved (and therefore nominally in effect) for more than 30 days. This was a violation of 10 CFR Part 50, Appendix E, Section V.

Violation (369, 370/85-02-01): Failure to Submit Revised Procedures to NRC Within 30 Days.

Discussions were held with licensee representatives concerning recent modifications to facilities, equipment, and instrumentation. By review of selected procedures, the inspector verified that procedural changes were made to reflect the replacement in October 1984 of the ringdown system for notification of State and local authorities by a selective signaling system. The inspector was told that the next revision of the Emergency Plan would also incorporate this change.

The organization and management of the emergency preparedness program were reviewed. The position of site Emergency Preparedness Coordinator (EPC) was reassigned as of June 1, 1984. The new EPC had 18 years of experience as a licensee employee. Training for his current position included a "train the trainer" course and an INPO EPC workshop. He expected to earn a degree in Management Science during 1985. The inspector's discussion with a licensee representative disclosed that there were no significant changes in the organization and staffing of the offsite support agencies since the last inspection.

The inspector reviewed the licensee's program for distribution of changes to the emergency plan and procedures. Document control records for the period March - December 1984 showed that the appropriate personnel and organizations were sent copies of plan and procedural changes, as required.

One violation and no deviations were identified in this program area.

7. Shift Staffing and Augmentation (82205)

Pursuant to 10 CFR 50.47(b)(2) and 10 CFR Part 50, Appendix E, Sections IV.A and IV.C, this area was inspected to determine whether shift staffing for emergencies was adequate both in numbers and in functional capability, and whether administrative and physical means were available and maintained to augment the emergency organization in a timely manner.

Shift staffing levels and functional capabilities of all shifts were reviewed and found to be consistent with the guidance of Table B-1 of NUREG-0654. The licensee has established a duty roster so that essential off-shift personnel are available if needed. The call-in procedure appeared to be effective in meeting Table B-1 goals.

The inspector discussed staff augmentation times with licensee representatives, who indicated that drills had confirmed that Table B-1 augmentation times could be met. The inspector reviewed licensee records dated June 25, 1984 and October 28, 1984 which showed that augmentation drills were held on those dates and that staff augmentation times were consistent with Table B-1 guidance.

No violations or deviations were identified in this program area.

8. Knowledge and Performance of Duties (Training)(82206)

Pursuant to 10 CFR 50.47(b)(15) and 10 CFR Part 50, Appendix E, Section IV.F, this area was inspected to determine whether emergency response personnel understood their emergency response roles and could perform their assigned functions.

The inspector reviewed the description of the training program, training procedures, and selected lesson plans, and interviewed members of the instructional staff. Based on these reviews and interviews, the inspector determined that the licensee had established a formal emergency training program.

Records of training for key members of the emergency organization for the period January - December 1984 were reviewed. According to the training records, the type, amount, and frequency of training were consistent with approved procedures.

The inspector conducted walk-through evaluations with selected key members of the emergency organization. During these walk-throughs, individuals were given various hypothetical sets of emergency conditions and data and asked to respond as if an emergency actually existed. The individuals demonstrated familiarity with emergency procedures and equipment, and no problems were observed in the areas of emergency detection and classification, notifications, and protective action decision-making.

No violations or deviations were identified in this program area.

9. Public Information Program (82209)

Pursuant to 10 CFR 50.47(b)(7) and 10 CFR Part 50, Appendix E, Section IV.D.2, this area was inspected to determine whether basic emergency planning information was disseminated to the public in the plume-exposure-pathway emergency planning zone (EPZ) on an annual basis.

The licensee has developed an emergency response information brochure for use by the public residing in or frequenting the 10-mile EPZ. Licensee representatives stated that the brochure was updated annually. Licensee procedures required a coordinated review and annual update of the brochure. Licensee documentation dated June 27 - July 31, 1984 showed that development of the brochure was coordinated with the appropriate offsite authorities. The inspector reviewed the current brochure and verified that it included the information specified by NUREG-0654, Section II.G. However, the inspector brought to the licensee's attention a provision in the McGuire brochure which could be misleading to the public and which, furthermore, contradicts NRC policy regarding recommended protective measures. On page 10 of the brochure (1985 edition) under the heading, "If you Are Ordered to Evacuate", there are instructions numbered 1 through 5. Instruction 3 informs the public as follows: "[If you were ordered to leave the area:] Hold a damp cloth over your nose and mouth. This would help keep radiation from entering your body." In a discussion with members of the licensee's

corporate staff, the inspector pointed out that there is no current NRC guidance which endorses a protective measure automatically linking public evacuation with this type of ad hoc respiratory protection. In fact, if such respiratory protection were warranted as a result of a release, in-place sheltering of the public would probably be preferable to evacuation. The questionable efficacy of the "damp cloth" method was also discussed, as was the hazard that could be created by one-handed drivers wearing (probably unnecessary) "masks." On page 9 of the brochure, members of the public are instructed to "Place a damp cloth over your nose and mouth" in the event that they are told to stay indoors (item 4 under the heading, "You Might Be Told To Stay Indoors"). For most hypothesized accidents, this instruction would not be necessary, and could produce physical discomfort with no attendant benefit, particularly in persons with respiratory problems. As a result of the discussion summarized above, the licensee agreed to delete from the brochure (beginning with the 1986 edition) the two aforementioned instructions regarding use of a damp cloth.

Inspector Follow-up Item (369, 370/85-02-02): Deletion From the Public Information Brochure of Instructions on Respiratory Protection.

According to licensee representatives, the means used by the licensee to inform the transient population of appropriate emergency response measures and action included posted notices and dissemination of public information brochures to municipal offices, gas stations, convenience stores, and other businesses in the area. The inspector visited nine of these establishments (listed in EP Figure G-2) and was able to verify (except at one store) that a supply of the 1984 edition of the brochure had been received in early 1984. However, brochures were not available at any of these locations, apparently because only a few copies (approximately 5-10) had been issued at each location, and the supply had been quickly exhausted. With distribution of the 1985 edition imminent, the licensee agreed to consider significantly increasing the number of copies supplied to each of the locations in EP Figure G-2.

Inspector Follow-up Item (369, 370/85-02-03): Enhancement of Availability of Public Information Brochure.

A review of licensee documentation showed that the 1985 edition of the public information brochure was recently sent to residences within the 10-mile EPZ. The public information brochure provided a point of contact for obtaining additional information. A telephone call was made to the designated point of contact to determine the type of information to be provided and the individual's qualification to provide such information. Based on the discussion, the inspector determined that the type of information to be provided was adequate and the individual had appropriate qualifications.

In addition to the public information brochure, licensee representatives indicated that the public information program includes an annual media day for informing news media personnel, public speaking engagements, tours of selected plant facilities, and lectures at the local schools. The inspector

also reviewed a description of the public information program in the licensee's emergency plan and procedures. Internal correspondence concerning implementation of the public information program was reviewed. Based on these reviews and interviews with licensee personnel, the inspector determined that the licensee's public information program continued to meet the applicable regulatory requirements.

No violations or deviations were identified in this program area.

10. Licensee Audits (82210)

Pursuant to 10 CFR 50.47(b)(14) and (16) 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.

Audits of the program were discussed with licensee representatives, who stated that an independent audit was conducted by the Audit Division of the licensee's QA Department from December 10, 1984 to January 4, 1985. The results are to be documented in Report No. 84-23(CM). This audit fulfilled the 12-month frequency requirement for such audits. Audit findings and recommendations were presented verbally to plant and corporate management on January 8, 1985. A review of past audit reports indicated that the licensee complied with the five-year retention requirement for such reports.

Although no written report on the most recent audit was available for review during this inspection, the inspector's review of the audit plan and discussions with licensee representatives led to findings concerning the audit's evaluation of the interfaces with State and local governments. The audit failed to include discussions with representatives of offsite support agencies in order to determine the adequacy of the working relationships with, and training provided to, those agencies. In addition, the audit was insufficiently thorough to determine that no documentation was available to verify that officials of the State of North Carolina had concurred in the licensee's EALs following the last annual review (see also paragraph 3). These findings resulted in the conclusion that the licensee had not complied with the requirements of 10 CFR 50.54(t).

Violation (369, 370/85-02-04): Failure to Conduct an Adequate Evaluation of the Interfaces with State and Local Government.

Licensee emergency plans and procedures required critiques following exercises and drills. Licensee documentation showed that critiques were held following periodic drills as well as the annual exercise. The records showed that deficiencies were discussed in the critiques, and recommendations for corrective action were made.

The licensee's program for follow-up action on audit, drill, and exercise findings was reviewed. Licensee procedures required follow-up on deficient areas identified during audits, drills, and exercises. The inspector reviewed a sample of licensee records which indicated that corrective action was taken on identified problems, as appropriate. The licensee had

established a tracking system called the McGuire Action Directory (MAD) as a management tool in following up on actions taken in deficient areas.

One violation and no deviations were identified in this program area.

11. Offsite Support (92706)

The inspector visited Charlotte Memorial Hospital and Medical Center and interviewed cognizant staff there regarding medical treatment of radiation-accident victims from the McGuire facility as specified in the letter of agreement between the hospital and the licensee. Hospital staff appeared to have an adequate working knowledge of their emergency response role with respect to the licensee's facility. The inspector was given a tour of the emergency treatment facilities, and was informed by a hospital representative that the hospital and the licensee have cooperated in the preparation and implementation of joint training sessions for hospital staff. The inspector had no further questions in this area.