

Official

DEC 28 1983

Docket Nos. 50-413 and 50-414

Duke Power Company  
ATTN: Mr. H. B. Tucker, Vice President  
Nuclear Production Department  
422 South Church Street  
Charlotte, NC 28242

Gentlemen:

SUBJECT: EMERGENCY PREPAREDNESS APPRAISAL, NOVEMBER 8-18, 1983

On August 1-5, 1983, a preoperational inspection was conducted at the Catawba Nuclear Station. During the period November 8-18, 1983, a special appraisal of the emergency preparedness program for the Catawba Nuclear Station was conducted that excluded the Post-Accident Sampling System and the procedures for operating the system and analyzing the samples. In addition, several more areas of your program were found to be incomplete and could not be evaluated. These areas are listed in Appendix C, "Incomplete Emergency Preparedness Items".

The findings of this appraisal indicate that certain deficiencies exist in your emergency preparedness program. These are discussed in Appendix A, "Emergency Preparedness Deficiencies". The deficiencies identified in Appendix A must be corrected prior to operation above 5% reactor power. You are requested to notify this office in writing as soon as possible after corrective actions for these deficiencies have been completed.

This inspection also indicates that there are areas that should be evaluated and considered for improvement in your emergency preparedness program. These areas are discussed in Appendix B, "Emergency Preparedness Improvement Items." Some of these areas were of such significance that you have committed to make improvements in your program by specific dates (see sections 2.2, 5.4.2.1, and 5.4.2.13 in the enclosed report). We recognize that an explicit regulatory requirement pertaining to each item identified in Appendix B may not currently exist. Notwithstanding this, you are requested to submit a written statement addressing the results of your consideration of each of the items in Appendix B. This statement should be submitted in conjunction with your notification of completion of corrective actions for the deficiencies identified in Appendix A. Your corrective actions are to be incorporated into the site emergency plan and procedures as appropriate.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures will be placed in the NRC's Public Document Room unless you notify this office, by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1).

The responses directed by this letter are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

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Should you have any questions concerning his inspection, we will be pleased to discuss them with you.

Sincerely,

Richard C. Lewis, Director  
Division of Project and  
Resident Programs

Enclosures:

1. Appendix A, Emergency Preparedness Deficiencies
2. Appendix B, Emergency Preparedness Improvement Items
3. Appendix C, Incomplete Emergency Preparedness Items
4. Office of Inspection and Enforcement  
Inspection Report Nos. 50-413/83-42  
and 50-414/83-35

cc w/encls:

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## APPENDIX A

### EMERGENCY PREPAREDNESS DEFICIENCIES

Based on the results of the NRC's appraisal of the Catawba Nuclear Station Emergency Preparedness Program, conducted November 8-18, 1983, the following deficiencies were identified (references are to sections in NRC Report Nos. 413/83-42 and 414/83-35).

#### 1. Training Program Established (3.1)

The licensee has not:

- Established the composition of repair/recovery teams as an integral function of the onsite emergency organization, nor developed and administered a specialized training program for the personnel who will staff such teams, with the description of said training program in the Emergency Plan (EP). (Reference 10 CFR 50, Appendix E, Part IV.F)
- Included (or referenced) in the EP is a description of the emergency response training programs for security personnel or the Fire Brigade. (Reference 10 CFR 50, Appendix E, Part IV.F.)

#### 2. Transportation (4.2.6)

The licensee has not made adequate provisions to insure that 4 suitable vehicles are available for use at all times in support of the 4 ground-based Field Monitoring Teams specified in EPIP HP/O/B/1009/04. (Reference 10 CFR 50.47(b)(8))

#### 3. Onsite (Out-of-Plant) Surveys (5.4.2.2)

The licensee has not identified the means for providing onsite (out-of-plant) survey coverage during emergencies. (Reference 10 CFR 50.47(b)(8) and (9))

#### 4. In-Plant Radiological Surveys (5.4.2.3)

The licensee has not:

- Established a procedure considering the overall responsibilities and priorities for health physics support of potential emergency activities. (Reference 10 CFR 50.47(b)(8) and (9))
- Provided adequate protection for emergency workers via a "buddy system" under emergency dose-rate and unstable plant conditions. (Reference 10 CFR 50.47(b)(8) and (9))

5. Radiation Protection During Emergencies (5.4.3.1)

The licensee's procedures do not include exposure guidelines consistent with the EPA Emergency Worker and Lifesaving Activity Protective Action Guides. (Reference 10 CFR 50.47(b)(11))

6. Evacuation of Owner-Controlled Areas (5.4.3.2)

The Site Assembly/Evacuation procedures do not include provisions for: (1) specific dose-rate and breathing-air levels of radionuclides within the reactor facilities, for initiating site assembly and evacuation, (2) a way to establish dose-rate habitability at assembly locations, and (3) radiation surveillance at the relocation sites if the Technical Support Center is not fully activated. (Reference 10 CFR 50.47(b)(10))

7. Onsite First-Aid/Rescue (5.4.3.5)

The responsibilities for search and rescue are not unambiguously defined so as to specify the duties of individuals within the security organization. (Reference 10 CFR 50.47(b)(2) and 10 CFR 50, Appendix E, Paragraph IV.A)

8. Security During Emergencies (5.4.4)

The responsibilities of Security personnel during emergencies are not unambiguously defined, including the interfaces between Security personnel, Security and other onsite response personnel, and offsite support groups so as to assure a timely response in an emergency. (Reference 10 CFR 50.47(b)(2) and 10 CFR 50, Appendix E, Paragraph IV.A)

## APPENDIX B

### EMERGENCY PREPAREDNESS IMPROVEMENT ITEMS

Based on the results of the NRC's appraisal of the Catawba Nuclear Station Emergency Preparedness Program, conducted November 8-18, 1983, the following items should be considered for improvement (references are to sections in NRC Report Nos. 413/83-42 and 414/83-35).

1. Indicating in the EP and the Emergency Plan Implementing Procedures (EPIPs) the persons down to the working level in the onsite organization, by position or title and name, who are assigned the responsibility for decontamination activities. (2.1)
2. Reviewing and revising Catawba Nuclear Station Directive (CNSD) 3.8.4 to assure meeting the minimum staff augmentation criteria in NUREG-0654, Section II.B, Table B-1. (2.2)
3. Performing a study or drills to verify the ability to meet the minimum staff augmentation criteria in NUREG-0654, Section II.B, Table B-1. (2.2)
4. Revising CNSD 3.8.4, Paragraph 7.3, to indicate that special training for certain groups in the emergency organization will be given on an annual basis. (3.1)
5. Establishing criteria for the selection and qualification of instructors. (3.1)
6. The periodic inventory of TSC emergency equipment should include the telephone instruments stored for emergency use. (4.1.1.2)
7. Evaluating during an exercise the effect of the small size of the OSC on the ability of the OSC to carry out its assigned emergency response functions. (4.1.1.3)
8. Using controlled copies of procedures in emergency kits instead of the present "information" copies. (4.2.1.1)
9. Specifying parametric values for the process radiation monitor values that currently state "in alarm" when used as emergency action levels for accident classification. (5.3)
10. Including the State of South Carolina's night, weekend, and holiday telephone number and the commercial telephone number for the NRC in the appropriate procedures. (5.4.1)
11. Providing training for the Field Monitoring Teams, including offsite support personnel, in the use of the Canberra-10 for field analyses of radioiodine cartridges and in site-area-specific features. (5.4.2.1)

12. Providing sufficient equipment for all Field Monitoring Teams. (5.4.2.1)
13. Coordinating the Field Monitoring Team's turnover location based on existing conditions. (5.4.2.1)
14. Modifying HP/O/B/1009/05 to include (1) verifying presence in the plume through beta measurements before attempting to collect an air sample, (2) locating keys to the various sample stations and gates, (3) reading the "in-flow" face of the cartridge, (4) purging the cartridge to remove some of the noble gases, and (5) verifying operability of the analytical equipment with the mock iodine source Ba-133 instead of Na-22. (5.4.2.1)
15. Using in-plant maps to document radiological conditions. (5.4.2.3)
16. Using in-plant maps showing predetermined or expected radiological conditions from the FSAR to aid in determining the most dose-saving routes. (5.4.2.3)
17. Specifying minimum protective-equipment requirements for monitoring support activities. (5.4.2.3)
18. Completing the Control Room initial dose assessment procedure. (5.4.2.13)
19. Analyzing the reliability and availability of the alternate method for determining dose rates in the reactor building. (5.4.2.13)
20. Modifying the procedures to include:
  - a. A method for determining a true projected dose and comparing it to the EPA PAGs
  - b. Guidelines for determining the expected duration of a release
  - c. Guidelines for immediately reassessing the projected dose based on changed conditions. (5.4.2.13)
21. Describing the assumptions and constants used in developing the equations in HP/O/B/1009/15. (5.4.2.13)
22. Localizing the responsibilities for authorizing emergency exposures. (5.4.3.1)
23. Removing from HP/O/B/1009/09 the implication that Class 2 personnel may be subjected to emergency exposures. (5.4.3.1)
24. Making all emergency workers aware of the emergency exposure limitations. (5.4.3.1)
25. Making provisions for expanding the respiratory-protection supplies and equipment during emergencies to assure that an ample supply is maintained. (5.4.3.1)

26. Developing maximum dose and dose-rate guidelines for performing the upper personnel-hatch measurement, or making alternate arrangements to acquire the data (5.4.3.1)
27. Clarifying the authorization and distribution of KI. (5.4.3.1)
28. Developing a workable means for assuring the designation of the Site Evacuation Coordinator. (5.4.3.2)
29. Modifying HP/O/B/1009/05 as follows: (1) the Section 3.1 precaution regarding high radioiodine levels should include a specific concentration value, (2) clarify what to do with the monitoring list in Section 3.3, (3) reference CNSD 3.0.7 and RP-10, (4) specify the required manpower for monitoring in Section 4.1.3, (5) include provisions for monitoring personnel to be evacuated should site dose rates or airborne radionuclide levels be significantly higher than normal background, making surveillance impractical, and (6) clarify the policy on the use of privately owned, contaminated vehicles for transport to the relocation site based upon the need for transporting all personnel. (5.4.3.2)
30. Providing a reference or requirement in RP-12 that CNSD 3.8.8 be addressed to assure the radiological safety of the repair or assessment teams. (5.4.5)
31. Including in the EP a statement that the EIPs will be reviewed and/or revised at least annually. (5.5.3)

## APPENDIX C

### INCOMPLETE EMERGENCY PREPAREDNESS ITEMS

Based on the results of the NRC's appraisal of the Catawba Nuclear Station Emergency Preparedness Program, conducted November 8-18, 1983, the following areas or items within areas were found to be incomplete and could not be appraised (references are to sections in NRC Report Nos. 413/83-42 and 414/83-35):

1. Training Program Established (3.1)  
Establish and implement training programs for (1) operator personnel in all applicable dose projection methods and (2) chemistry personnel in procedures related to the Post-Accident Sampling System (PASS).
2. Training Program Implemented (3.2)  
Implement training in:
  - a. Emergency classification and protective action recommendations.
  - b. Information transmission to offsite agencies.
3. Control Room (4.1.1.1)
  - a. Provide the Control Room with approved copies of all emergency plan implementing procedures including EOPs, APs, and the RP.
  - b. Complete installation of communications equipment.
  - c. Upon installation of all Control Room communications equipment and the issuance of all approved emergency plan implementing procedures, complete the training of Control Room personnel in the use of the communications equipment and the procedures.
4. Technical Support Center (4.1.1.2)
  - a. Complete the installation and testing of the TSC emergency ventilation process radiation monitor.
  - b. Complete the installation and testing of the TSC communications system.
5. Medical Treatment Facilities (4.1.2.2)  
This entire area will be reviewed during a future inspection.
6. Decontamination Facilities (4.1.2.3)  
This entire area will be reviewed during a future inspection.

7. Emergency Kits and Survey Instrumentation (4.2.1.1)

This entire area will be reviewed during a future inspection.

8. Area and Process Radiation Monitors (4.2.1.2)

- a. Complete the installation, calibration, and preoperational tests of the area radiation and process monitors including the appropriate identification of same in the Control Room.
- b. Complete the high-range containment and steam-line monitor installations, calibrations, and preoperational tests.
- c. Establish a technical basis for the alarm settings of ARMs, high-range containment and steam-line monitors for Site Area and General Emergencies.
- d. Establish the posting of the EALs for Site Area and General Emergencies on or near the containment, steam-line and other area radiation monitor readouts that are used as backups for the containment monitors.

9. Non-Radiation Process Monitors (4.2.1.3)

This entire area will be reviewed during a future inspection.

10. Meteorological Instrumentation (4.2.1.4)

- a. Install, make operational, and calibrate the meteorological tower sensors and the remaining required equipment, including connections to the Control Room recorders.
- b. Ensure that the NOAA radio is installed and operational in the Control Room.
- c. Establish a program to verify that data availability goals are met.
- d. Ensure that the equipment is installed and operational, procedures are issued and implemented, and personnel are trained in the transfer of data from the DAC system to the VAX system.

11. Respiratory Protection (4.2.2.1)

This entire area will be reviewed during a future inspection.

12. General Content and Format of Procedures (5.1)

Complete all abnormal procedures (APs), emergency operations procedures (EOPs) and Emergency Plan Implementing Procedures (EPIPs).

13. Emergency, Alarm, and Abnormal Occurrence Procedures (5.2)

Issue approved versions of EOPs (01 and 03) and APs (11, 17, 18, 19, and 20).

14. Implementing Instructions (5.3)

Issue all EIPs in final, approved versions and train facility personnel in the use of these procedures.

15. Assessment Actions (5.4.2)

This entire area will be reviewed during a future inspection.

16. Dose Projection (5.4.2.13)

Complete the development of the computer software for the Class A dose assessment model and make it available for the use of dose assessment personnel.

17. Review, Revision, and Distribution (5.5.3)

a. Implementation of the licensee's program for an annual review and/or revision of the EP and EIPs as provided for in PT/O/B/4600/07.

b. Implementation of the licensee's program for verification on the phone numbers listed in the EIPs as required by procedure PT/O/B/4600/05.

18. General Public (6.2)

a. Disseminating the emergency plan booklets to the general population and other specified groups.

b. Placing emergency signs at boat docks and other applicable locations.

19. Walk-through Observations (7.2)

This entire area will be reviewed during a future inspection.