

*Official*

DEC 23 1985

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

Gentlemen:

SUBJECT: MCGUIRE EMERGENCY RESPONSE FACILITY APPRAISAL

The NRC is conducting special appraisals of emergency response facilities (ERFs) at all operating nuclear power reactors to verify that licensees have completed these facilities and have met the respective requirements defined in Supplement 1 to NUREG-0737. The objectives of these appraisals are to determine that the ERFs are capable of performing those functions needed to assist licensees in taking adequate protective measures in the event of a radiological emergency, and to assure that requirements in Supplement 1 to NUREG-0737 have been satisfied. We will use the findings from these appraisals as a basis not only for requesting individual licensee action to correct deficiencies, but also for effecting improvements in NRC requirements and guidance.

During the period of September 3-11, 1985, the NRC conducted a special appraisal of the ERFs at the McGuire Nuclear Station. This appraisal was performed using Draft Revision 5 of IE Inspection Procedure 82212. Areas examined during this appraisal are identified in the enclosed report (50-369/85-29, 50-370/85-28). Within these areas, the appraisal team reviewed selected procedures and records, inspected the facilities, equipment and supplies, observed simulated use of the equipment and supplies, and interviewed personnel.

Within the scope of this appraisal, no violations or deviations were identified.

The findings of this appraisal indicate that certain weaknesses exist. These are discussed in Appendix A, Appraisal Weaknesses. The appraisal also indicates that several areas were found to be incomplete, and could not be evaluated during the appraisal. These findings are listed in Appendix B, Appraisal Open Items. Finally, there are areas which should be evaluated and considered for improvement. These areas are listed in Appendix C, Appraisal Improvement Items. We recognize that explicit regulatory requirements pertaining to improvement items may not currently exist. Notwithstanding the latter, please advise us within 45 days of the date of this letter of action you plan to take, showing the estimated date of completion with regard to the findings identified in the Appendices.

With regard to the Appraisal open items, we are particularly interested in your proposed reconfiguration of the McGuire Technical Support Center (TSC) and completion for construction of your Crisis Management Center (CMC). Your continued progress regarding these facilities will be reviewed in future inspections.

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In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures will be placed in the NRC 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). If we do not hear from you in this regard within the specified periods noted above, the report will be placed in the Public Document Room.

Should you have any questions concerning this letter, please contact us.

Sincerely,

Virgil L. Brownlee, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Enclosures:

1. Appendix A, ERF Weaknesses
2. Appendix B, ERF Open Items
3. Appendix C, ERF Improvement Items
4. Inspection Report Nos.:  
50-369/85-29 and 50-370/85-28

cc w/encls:

✓ T. L. McConnell, Station Manager

bcc w/encls:

✓ D. Hood, NRR  
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Document Control Desk  
State of North Carolina  
✓ NRC Resid Inspector

RII

ACunningham:ht  
12/16/85

RII

TRDecker  
12/17/85

RII

DMCollins  
12/17/85

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JPS  
12/18/85

RII

HDance  
12/23/85

## APPENDIX A

### APPRAISAL WEAKNESSES

The following items indicated areas of weakness in the Emergency Response Program:

1. Meteorological data processed through the Operator Aid Computer had not been validated (1.2.4.2). (50-369/85-29-17, 50-370/85-28-17)
2. There was no procedure for use of the OAC for calculating dose assessment (1.2.4.2). (50-369/85-29-25, 50-370/85-28-25)

## APPENDIX B

### APPRAISAL OPEN ITEMS

The following items were incomplete and will be reviewed in future inspections:

1. Definition of the extent of planned spatial and configuration changes to the Technical Support Center and projected completion of same (1.1.1.1). (50-369/85-29-01, 50-370/85-28-01)
2. Implementation of Regulatory Guide 1.97, monitoring with any exceptions confirmed by NRR (1.2.1.3). (50-369/85-29-13, 50-370/85-28-13)
3. Submittal to NRC of complete documentation (description of the technical basis) for the puff-advection atmospheric dispersion model and a complete description of the upgraded meteorological measurements program (1.2.4.2). (50-369/85-29-21, 50-370/85-28-11)
4. Submittal to NRC of appropriate documentation required to complete evaluation of the Class A Model computerized dose assessment (1.2.4.2). (50-369/85-29-23, 50-370/85-28-23)
5. Completion of construction and establishment of operational readiness of the consolidated Crisis Management Center. (3.1.1.2). (50-369/85-29-33, 50-370/85-28-33)
6. Establishment of dedicated communication lines between the CMC and VAX computers, and use of dial-up as backup (3.2.3). (50-369/85-29-36, 50-370/85-28-36)

## APPENDIX C

### APPRAISAL IMPROVEMENT ITEMS

The following items should be evaluated and considered for improvement:

1. Expansion of the Technical Support Center (TSC) dose assessment area to approximately three times its present size or approximately 300 square feet to accommodate the expected staff (1.1.1.1). (IFI 50-369/85-29-02, 50-370/85-28-02)
2. Sizing the Emergency Director's office - Room 913, to accommodate the personnel expected to staff the general area (1.1.1.1). (IFI 50-360/85-29-03, 50-370/85-28-03)
3. Increasing the computer room by approximately two feet to provide additional walking and maintenance space. (1.1.1.1). (IFI 50-369/85-29-04, 50-370/85-28-04)
4. Providing areas of the TSC with additional writing surfaces, document lay-down areas, and chairs (1.1.1.1). (IFI 50-369/85-25-05, 50-370/85-24-05)
5. Maintaining radiation monitors in the TSC in an operating mode on a continuous basis (1.1.1.5). (IFI 50-369/85-29-06, 50-370/85-28-06)
6. Using a different technique to alert control room operators that core temperature is outside of the expected range (1.1.1.6). (IFI 50-369/85-29-07, 50-370/85-28-07)
7. Validating Operator Aid Computer (OAC) data through use of appropriate software algorithms. (1.1.1.6). (IFI 50-369/85-29-08, 50-370/85-28-08)
8. Automating the present manual transfer of data from the OAC to VAX computers, providing the VAX with continuous access to data, at or near real-time (1.1.1.6). (IFI 50-369/85-29-09, 50-370/85-28-09)
9. Providing graphic trending capability in the TSC, using a sampling frequency of trended data adequate to detect significant changes (1.1.1.6). (IFI 50-369/85-29-10, 50-370/85-28-10)
10. Changing the OAC terminal keyboards, positioned in a nearly vertical orientation, to an ergonomically correct position to minimize mis-keying (1.1.1.6). (IFI 50-369/85-29-11, 50-370/85-28-11)
11. Providing procedures or instructions developed to describe the method for obtaining monitoring data from the OAC in the TSC (1.1.2.1). (IFI 50-369/85-29-12, 50-370/85-28-12)

12. Acquiring a dedicated line if trend plotting will be relied on to support critical plant safety analysis (1.2.3.3). (IFI 50-369/85-29-14, 50-370/85-28-14)
13. Evaluating locations of the meteorological towers to determine the quality of data, and the effects of the nearby warehouse buildings, proximity of major plant structures, and uneven terrain in the area on such data (1.2.4.2). (IFI 50-369/85-29-15, 50-370/85-28-15)
14. Incorporating the meteorological measurements program, as updated in 1983, into the FSAR (1.2.4.2). (IFI 50-369/85-29-16, 50-370/85-28-16).
15. Evaluating the representativeness of meteorological data from the National Weather Service (NWS) station at Charlotte and/or Catawba for real-time conditions at McGuire or installing of backup or redundant onsite meteorological measurements, including separate power supplies, cabling, and recorders (1.2.4.2). (IFI 50-369/85-29-18, 50-370/85-28-18)
16. Revising procedures which provide for use of meteorological data to reflect the hierarchy for data substitution, and specifying averaging period (e.g., 15 minutes) and valid time of the observations (1.2.4.2). (IFI 50-369/85-29-19, 50-370/85-28-19)
17. Specifying averaging period and valid time of observation for digital displays of meteorological data (e.g., via the OAC or the summary sheet provided through the VAX computer) (1.2.4.2). (IFI 50-369/85-29-20, 50-370/85-28-20)
18. Identifying of regional and forecast meteorological information to be provided on request by the NWS Station in Charlotte (1.2.4.2). (IFI 50-369/85-29-22, 50-370/85-28-22)
19. Modifying the Dose Assessment Class A Model to include ingestion pathway dose calculations and making available to the NRC or submitting to the NRC documentation related thereto. (1.2.4.2.B). (IFI 50-229/85-29-24, 50-370/85-28-24).
20. Evaluating the Nuclear-23 method to assure that both whole body and thyroid doses are appropriately considered in protective action recommendations (1.2.4.2.B). (IFI 50-369/85-29-26, 50-370/85-28-26)
21. Making the "Nuclear-23" available for periodic use during exercises to assure control room personnel proficiency in use of the program. Licensee representatives stated that use of "Nuclear-23" is prevented by interlock or relay until such time that an emergency occurs (1.2.4.2.B). (IFI 50-369/85-29-27, 50-370/85-28-27)
22. Providing an uninterrupted power supply for all necessary components of the data acquisition and display system, e.g., the VAX computer, the dose assessment terminal, the Mohawk data link, etc. (1.2.6.2). (IFI 50-369/85-29-28, 50-370/85-28-28)



23. Verifying that the Crisis Management Center (CMC) does not exercise priority to the VAX thus requiring the Station to conduct manual calculation of dose assessments. (1.2.7.1). (IFI 50-369/85-29-29, 50-370/85-28-29)
24. Inserting into procedures the actual levels at which emergency action is required for event classification in lieu of referencing "Exceeds Technical Specifications" or "Exceeds 10 x Tech Specs" (1.2.7.2). (IFI 50-369/85-29-30, 50-370/85-28-30)
25. Providing emergency lighting in the OSC (2.1.1.3). (IFI 50-369/85-29-31, 50-370/85-28-31)
26. Improving the quality of drawings to include phone locations, phone numbers, air supply headers, etc. (2.1.1.4). (IFI 50-369/85-29-32, 50-370/85-28-32)
27. Providing site emergency planning zone maps for the McGuire Station (3.1.1.6). (IFI 50-369/85-29-34, 50-370/85-28-34)
28. Providing the CMC with a continuous data stream at, or near, real time (3.1.1.6). (IFI 50-369/85-29-35, 50-370/85-28-35)
29. Standardizing McGuire Station data sets to include all Regulatory Guide 1.97 parameters in the standard format (3.7.2). (IFI 50-369/85-29-37, 50-370/85-28-37)
30. Improving the method of data transmission to the CMC such that data is real-time, or near real-time data (3.7.2). (IFI 50-369/85-29-38, 50-370/85-28-38)
31. Reviewing Enclosure 5.5 to procedure HP/O/B/1009/13 regarding source term "corresponds to" to ensure that its intended purpose is understood (3.3.3.3). (IFI 50-369/85-29-39, 50-370/85-28-39)