UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

QUALITY ASSURANCE PROGRAM, AMENDMENT 21 AND SUPPLEMENTS

DUKE ENERGY CORPORATION

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

McGUIRE NUCLEAR STATION, UNITS 1 AND 2

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-269, 50-270, 50-287, 50-369, 50-370, 50-413, AND 50-414

1.0 INTRODUCTION

In a letter dated July 11, 1996, Duke Energy Corporation (DEC, previously Duke Power Company) submitted Amendment 21 to the Duke Power Company Topical Report, *Duke-1-A, Quality Assurance Program* (Reference 1), covering Oconee Nuclear Station, Units 1, 2, and 3, McGuire Nuclear Station, Units 1 and 2, and Catawba Nuclear Station, Units 1 and 2. DEC submitted fiive supplements to Amendment 21 (References 2, 3, 5, 6 and 7). Amendment 21 contains: (1) A major revision of the sections which address procurement, identification, control, handling, storage, and shipping of materials items; (2) Changes to the qualifications for lead auditor certification; (3) A deletion of the section addressing the Integrated Safety Assessment; and (4) Other clarifications and additions to the Duke Quality Assurance Program.

The staff reviewed DEC's July 11, 1996, Amendment 21, and the November 19 and December 3, 1996, supplements. The staff also reviewed DEC's June 2, August 13, and August 26, 1997, responses to the staff's request for additional information dated February 21, 1997. The staff's review was performed in accordance with NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Chapter 17.3.

2.0 EVALUATION

2.1 Amendment Evaluation

The following staff evaluation references item numbers found in Attachment 1, "Listing and Discussion of Amendment 21 Contents" of Reference 1. These proposed program modifications include changes to the fire protection engineer requirements, lead auditor requirements, procurement control, and integrated safety assessment. Many of the changes are also administrative in nature.

2.1.1 Administrative Changes.

Item 1 - Pages xi, xii, xiii. List of Effective Pages and List of Amendments were revised as necessary for the implementation of Amendment 21.

Item 2 - Section 17. Recognizes that software is now an example of a supplier-provided service.

Item 4 - Table 17-1. Revised an incorrect reference from 17.3.3.2.8, Suppliers, to 17.3.3.2.6, "Self Initiated Technical Audit."

Item 6 - Section 17.3.1.2.1. Changed Information Technology Services (ITS) Department to Information Management (IM) Department.

Item 7 - Section 17.3.1.2.5. Changed General Manager, Purchasing, to General Manager, Corporate Materials Management, and changed Manager, Technical Services, to Manager, Business & Technical Services. Added discussion of responsibility related to central storage facilities.

Item 8 - Section 17.3.1.2.7. Revised the Power Delivery Department responsibility and reportability description.

Item 9 - Section 17.3.1.2.8. Added a description of the control of interfaces used for quality-related activities performed by the Power Delivery Department.

Item 10 - Figure 17-4. Revised the Commodities and Facilities Management organization chart.

Item 11 - Section 17.3.2.2. Added the On-Duty Emergency Coordinator to list of positions authorized to approve station modifications for the Station Manager.

Item 12 - Section 17.3.2.4. Reworded the entire section to better reflect the actual quality assurance program. The reduction in commitments are discussed in Section 2.1.5 of this Safety Evaluation; however, the other changes are administrative in nature.

Item 13 - Section 17.3.2.13. This addition describes the media used to process information in the corrective action program.

Item 14 - Section 17.3.2.13. Changed Nuclear Services to Safety Assurance.

Item 15 - Section 17.3.2.14. Changed "cover letter" to "distribution indices."

Item 16 - Section 17.3.2.14. Administrative in nature, deleted the reference to the Regulatory Audits Section Procedures Manual and placed the information in the Nuclear Policy Manual.

Item 17 - Section 17.3.2.14. The revision in the response to the request for information deleted the reference to the Nuclear Safety Review Board (NSRB) Procedures Manual and placed the procedures in the Duke Nuclear Policy Manual. The approval of the NSRB procedure is by the Senior Vice President, Nuclear Generation.

Item 18 - Section 17.3.2.14. The information on maintenance and testing of electrical equipment procedures has been moved from the Power Delivery Department manuals to the Electrical System Support (ESS) function manuals.

Item 19 - Page 17-38. Changed "Nuclear Services" to "Nuclear General Office."

Item 20 - Page 17-41. Changed "preview" and "Purview" to "purview".

Item 21 - Section 17.3.3.2.1. Changed "Senior Vice President Power Generation Group" to "Senior Vice President Nuclear Generation."

Item 22 - Section 17.3.3.2.1. Revised information to state Nuclear Safety Review Board's role in the assessment of site performance.

Item 23 - Section 17.3.3.2.3. Changed to describe the review function performed by the Nuclear Safety Review Board staff on the scope of audits.

Item 25 - Section 17.3.3.2.5. Revised the description of the process used to determine the minimum scope of corporate audits.

Item 27 - Section 17.3.3.2.7. Renumbered to 17.3.3.2.6 to account for the deletion in Item 26.

Item 28 - Section 17.3.3.2.8. Renumbered to 17.3.3.2.7 to account for the deletion in Item 26.

The administrative changes listed above in this section do not constitute a reduction in commitment and are, therefore, acceptable.

2.1.3 Fire Protection Engineer Requirements

Item 3 - Table 17-1. Previously, the Fire Protection Engineer was a registered Professional Engineer qualified for membership grade status in the Society of Fire Protection Engineers. The proposed alternative qualification of the Fire Protection Engineer is a graduate of an engineering curriculum of accepted standing and completed no less than 6 years of engineering attainment indicative of growth in engineering competency and achievement; 3 years of which shall have been in responsible charge of fire protection engineering work. This change is considered by the staff to be a reduction in commitment. However, the proposed change does not significantly reduce the level of safety, and is, thus, acceptable.

2.1.4 Lead Auditor Requirements

Item 5 - Table 17-1. ANSI/ASME N45.2.23-1978 requires that a prospective Lead Auditor shall have participated in a minimum of five (5) quality assurance audits within a period of time not to exceed three (3) years prior to the date of qualification; one audit of which shall be a nuclear quality assurance audit within the year prior to the individual's qualification. DEC's proposed alternative states:

> In lieu of prospective lead auditors participating in a minimum of five quality assurance audits within a period of three years prior to date of certification, prospective lead auditors shall demonstrate their ability to effectively lead an audit team and shall have participated in at least one nuclear quality assurance audit within one year preceding the individual's effective date of qualification. Upon successful demonstration of the ability to lead audits, and having met the other provisions of ANSI N45.2.23-1977, the individual may be certified as being qualified to lead audits. This process is described in approved procedures which require documentation of the evaluation and demonstration of results.

DEC's proposed change is considered by the staff to be a reduction in commitment, but is consistent with the staff's October 24, 1996, letter to NEI entitled "Review of Nuclear Energy Institute (NEI) Proposed Improvements to Quality Assurance Programs." The change is, thus, acceptable.

2.1.5 Procurement Control

Item 12 - Section 17.3.2.4. An addition is made to permit a 3-month grace period (with management approval) in the frequency for supplier evaluation. The annual reevaluations may be extended by 3 months, from 12 to 15 months, with written approval of the Supplier Verification Manager. The triennial audit requirement may be extended by 3 months from 36 to 39 months, with the written approval of the Supplier Verification Manager for reasons such as: accommodating manufacturing schedules, synchronizing with other utility audits, or allowing time for implementation of supplier quality assurance program changes. The staff considers the proposed change to represent a reduction in commitment, but is an acceptable alternative.

2.1.6 Integrated Safety Assessment

Item 24 - Section 17.3.3.2.3 and Item 26 - Section 17.3.3.2.6. The change deletes the Integrated Safety Assessment and replaces it with a more real-time and modern information system to assess plant performance.

a. A nuclear system event report is processed by the Nuclear Engineering Division on a monthly basis and measures nuclear performance. The report is issued to senior management and classifies any nuclear event or potential nuclear event on a systematic basis. The report is published electronically for all nuclear employees. This report is also provided to NSRB members for review. This process is referenced in Section 17.3.2.13.

b. NSRB meetings are now performed more frequently, and this contributes to DEC's ability to more accurately assess current nuclear performance at the three nuclear stations. Senior management is now more involved in the NSRB activities. Identified station-specific and generic problems are discussed in the NSRB meetings. Additionally, the NSRB has become more involved in the assessment of each stations' events and trends of nuclear significance. This process is described in Section 17.3.3.2.1.

c. DEC has updated the investigative and corrective action processes to electronically track and trend site problems. Problems identified in this process are also considered for generic implications. Reports on problem activities are reported to senior management and the NSRB on a monthly basis. This process is referenced in Section 17.3.2.13.

d. Data obtained from internal audits are now being provided to management through periodic trend summaries as discussed in Section 17.3.3.2.3.

DEC's updated investigative and corrective action process produces a monthly report and trend summaries are provided to management from an internal audit. These reports and trend summaries are proposed as a replacement for the Integrated Safety Assessments audits that were performed twice annually. The Safety Assurance Group at each site performs the

monthly report and trend summaries. The Safety Assurance Group is independent of station operation management and reports to each Site Vice President. This change is considered by the staff to be a reduction in commitment, but is an acceptable alternative to the Integrated Safety Assessment.

2.2 DEC's Supplement Letter

These revisions involved changes to the DEC Nuclear General Office (NGO) organization. The NGO reorganization, which became effective October 23, 1996, eliminated the Engineering Support Division (ESD) and transferred the affected work functions to other existing divisions within the NGO organization. The Procurement Engineering and Supplier Verification Sections of the former ESD have been relocated to the Station Support Division. The maintenance and engineering functions (Mechanical Equipment and Valves, Mechanical Systems, Civil/Structural, and Electrical Systems and Equipment Sections) of the former ESD have been relocated to the Nuclear Engineering Division. The staff concludes that the changes are administrative in nature, reflecting primarily organizational and title changes as the actual functional responsibilities will continue to be performed; the changes are acceptable.

3.0 CONCLUSION

The staff reviewed DEC's submittals, and determined that the changes to the quality assurance program are acceptable in that the quality assurance program continues to satisfy the criteria of Appendix B of 10 CFR Part 50. Some of the changes constituted reductions in commitment, but were found to be acceptable as previously stated.

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REFERENCES:

1. DEC letter dated July 11, 1996, submitting Amendment 21 to the Duke Power Company Topical Report, *Duke-1-A, Quality Assurance Program* for Oconee Nuclear Station Units 1, 2, & 3, McGuire Nuclear Station Units 1 & 2, and Catawba Nuclear Station Units 1 & 2.

2. DEC letter dated November 19, 1996, submitting a supplement to Amendment 21 to the Duke Power Company Topical Report, *Duke-1-A, Quality Assurance Program*.

3. DEC letter dated December 3, 1996, submitting an additional supplement to Amendment 21 to the Duke Power Company Topical Report, *Duke-1-A, Quality Assurance Program*.

4. Letter, H. N. Berkow of NRC to M. S. Tuckman of DEC, dated January 29, 1997, requesting additional information on QA Program Amendment 21.

5. DEC letter dated June 2, 1997, submitting a response to an NRC request for additional information.

6. DEC letter dated August 13, 1997, submitting additional information.

7. DEC letter dated August 26, 1997, submitting additional information.