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A Duke Energy Company

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June 13, 2001

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: **Application to Renew the Operating Licenses of McGuire Nuclear Station, Units 1 & 2 and Catawba Nuclear Station, Units 1 & 2**

Docket Nos. 50-369, 50-370, 50-413 and 50-414

Dear Sir:

Pursuant to U.S. Nuclear Regulatory Commission (NRC) regulations set forth in 10 C.F.R. Parts 50, 51 and 54, Duke Energy Corporation (Duke) hereby applies for the renewal of the operating licenses for the McGuire Nuclear Station (McGuire), Units 1 and 2, and Catawba Nuclear Station (Catawba), Units 1 and 2, originally issued in 1981, 1983, 1985 and 1986 respectively. These licenses were all issued by the NRC under Section 103 of the Atomic Energy Act of 1954, as amended (AEA). Duke's Application to Renew the Operating Licenses of McGuire Nuclear Station, Units 1 and 2 and Catawba Nuclear Station, Units 1 and 2 (the Application), is enclosed.[1]

The submittal of concurrent applications to renew the operating licenses of all four of these units was approved by the NRC in response to Duke's request for an exemption from the schedule requirements of 10 C.F.R. § 54.17(c).[2]

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[1] In accordance with NRC requirements in 10 C.F.R. §§ 54.17 and 50.4, Duke is submitting an original and thirteen (13) copies of this Application. A copy is also being provided to the NRC Region II Administrator. Twenty-six (26) copies of the Applicant's Environmental Report, Operating License Renewal Stage, for each station are being provided to the NRC, pursuant to 10 C.F.R. § 51.55. Duke submitted a request for exception to the copy requirements of 10 C.F.R. § 50.4 by letter dated December 19, 2000. In a letter dated March 8, 2001, the NRC staff approved this request.

[2] By letter dated June 22, 1999, Duke requested an exemption pursuant to 10 C.F.R. §§ 54.15 and 50.12 from the schedular requirements of 10 C.F.R. § 54.17(c) to allow the submission of applications to renew the operating licenses for McGuire Unit 2, and Catawba Units 1 and 2 earlier than 20 years before expiration of the current operating licenses but not earlier than June 13, 2001 (20 years after McGuire Unit 1 was initially licensed). In a letter dated October 1, 1999, the NRC staff approved the exemption request for McGuire Unit 2 and Catawba Units 1 and 2, thereby permitting the submittal of concurrent applications to renew the operating licenses of all four units on or after June 13, 2001.

For McGuire Unit 1 (Facility Operating License NPF-9), the requested renewal would extend the existing license expiration date from midnight June 12, 2021, until midnight June 12, 2041. For McGuire Unit 2 (Facility Operating License NPF-17), the requested renewal would extend the existing license expiration date from midnight March 3, 2023, until either midnight March 3, 2043 or midnight 40 years from the date of the issuance of the renewed operating license for Unit 2, whichever is earlier.

For Catawba Unit 1 (Facility Operating License NPF-35), the requested renewal would extend the existing license expiration date from midnight December 6, 2024, until either midnight December 6, 2044 or midnight 40 years from the date of the issuance of the renewed operating license for Unit 1, whichever is earlier. For Catawba Unit 2 (Facility Operating License NPF-52), the requested renewal would extend the existing license expiration date from midnight February 24, 2026, until either midnight February 24, 2046 or midnight 40 years from the date of the issuance of the renewed operating license for Unit 2, whichever is earlier.[3]

The technical and environmental reviews performed in connection with this Application cover operation for a period of sixty years. As reflected in the requested revisions to the license expiration dates, Duke recognizes the legal limits associated with the term of renewed operating licenses. Nonetheless, Duke requests that the staff complete its safety and environmental reviews such that 60-years of operation are evaluated, even though the renewed licenses issued may actually provide somewhat less than an additional 20-years of operation beyond the end of the current operating licenses of one or more of the McGuire or Catawba units.

Duke's Application satisfies applicable requirements in 10 C.F.R. §§ 54.17, 54.19, 54.21, 54.22, and 54.23. Duke also has reviewed and addressed other relevant filing requirements found in 10 C.F.R. Part 2, Subpart A, and 10 C.F.R. §§ 50.4, 50.30, and 50.33. Duke believes that this Application, taken in its entirety, contains information and analyses sufficient to support the Commission findings required by 10 C.F.R. § 54.29 for an additional twenty years of operation for each unit beyond the end of its current operating license or for a total of 40-years from the date of issuance of the renewed licenses, whichever is earlier. Specifically, as required by Part 54, actions have been identified that have been or will be taken to manage the effects of aging on the structures and components subject to aging management review, such that their intended functions will be maintained consistent with the current licensing basis during the renewed term of operation of each McGuire and Catawba unit or for sixty years. Time-limited aging analyses have been identified and demonstrated to meet the requirements set forth in 10 C.F.R. § 54.21(c)(1). In addition, Duke has not identified any McGuire or Catawba-specific exemptions granted pursuant to 10 C.F.R. §50.12 that are in effect and are based on time-limited

[3] As set forth in 10 C.F.R. § 54.31, the renewed license cannot exceed a term of 40 years, but is subject to further extension.

aging analyses. Finally, the Environmental Reports submitted for McGuire Nuclear Station and Catawba Nuclear Station, respectively, as part of this Application satisfy applicable provisions in 10 C.F.R. Part 51, Subpart A.

The Application contains the information required by Commission regulations and is presented in a manner designed to allow the NRC to make the findings required by 10 C.F.R. § 54.29 in a timely and efficient manner. The guidance contained in Supplement 1 to Regulatory Guide 4.2, "Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses" (September 2000), was used in the preparation of the plant specific environmental reports contained in Appendix E of this Application. In addition, draft Regulatory Guide DG-1104, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" (August 2000) and draft "Standard Review Plan for the Review of License Renewal Applications for Nuclear Power Plants" (SRP-LR) (August 2000) have been used as guidance in preparation of the remaining portions of this Application.[4] Appendix A.3 of SRP-LR (August 2000) states that the version of NUREG-0933, "A Prioritization of Generic Safety Issues" that is current on the date six months before the date of the license renewal application should be used by an applicant. In accordance with this guidance, Duke used Supplement 24 of NUREG-0933 (June 2000) in the preparation of this Application.[5]

By its nature, preparation of a license renewal application requires substantial planning and preparation. SECY-01-0074 dated April 26, 2001 provided proposed final versions of three guidance documents for use by license renewal applicants: Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," NUREG-1800, "Standard Review Plan for the Review of License Renewal Applications for Nuclear Power Plants" and NUREG-1801, "Generic Aging Lessons Learned. On May 7, 2001, Duke received a copy of SECY-01-0074, along with all of its attachments from the NRC. Because the McGuire and Catawba license renewal technical reviews were complete and because the industry activities to demonstrate a process to use these guidance documents in a license renewal application are still in progress, these guidance documents have not been used by Duke in preparing this Application.

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[4] In this Application, systems, structures and components are described consistent with their respective locations in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," (July 1981), except where the internal operating environment or function of the system, structure or component suggests a more appropriate section for the description within the Application. In these situations, the system, structure, or component is described in the more appropriate section.

[5] SRP-LR (August 2000) inaccurately references Supplement 23 of NUREG-0933, April 1999 as the version current six months before the date of this Application.

The Application to Renew the Operating Licenses of McGuire Nuclear Station, Units 1 and 2, and Catawba Nuclear Station, Units 1 and 2, assumes throughout that licensed activities are now conducted, and will continue to be conducted, in accordance with the facilities' current licensing bases (e.g., use of low enriched uranium fuel only). Any changes made to the current licensing basis of McGuire Nuclear Station, Units 1 and 2 or Catawba Nuclear Station, Units 1 and 2 during the staff review of this Application will be made in accordance with the AEA and with Commission regulations.[6] Following issuance of the renewed operating licenses, Duke will address any future changes in the current licensing basis at the time of those changes, and in accordance with governing NRC regulations.

One potential future change to the current licensing basis involves the use of mixed oxide (MOX) fuel at McGuire and Catawba. As a part of the international program to reduce stockpiles of surplus weapons plutonium in the United States and in Russia, Duke is currently evaluating and planning for the use of MOX fuel in batch quantities (up to 40% core fractions) in its McGuire and Catawba reactors. Duke will perform all required safety analyses and environmental evaluations, and will obtain necessary NRC approvals and license amendments, prior to loading any MOX fuel in its reactors. Duke would address any changes in the McGuire and Catawba licensing bases related to the use of MOX fuel, and any long-term impacts, in the associated MOX-related licensing submittals to NRC. Duke is planning to submit, later this year, a license amendment request to allow the loading of a limited number of MOX fuel assemblies. Use of those demonstration MOX fuel assemblies would begin no earlier than late 2003. The current schedule calls for submittal in late 2003 or early 2004 of license amendment requests to allow the use of MOX fuel in batch quantities, with such use beginning no earlier than 2007. The eventual schedules for MOX fuel-related license amendment requests and for use of MOX fuel at McGuire and Catawba are dependent on various factors, including NRC reviews, U.S. Department of Energy actions, international agreements, and plutonium disposition activities in Russia. Based on the number and type of external factors involved, the currently contemplated schedule is subject to change. For the reasons noted above, any potential MOX fuel-related changes to the current licensing basis will be addressed in the associated MOX fuel-related licensing submittals, not in the Application to Renew the Operating Licenses of McGuire Nuclear Station, Units 1 and 2, and Catawba Nuclear Station, Units 1 and 2.

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[6] In accordance with 10 C.F.R. § 54.21(b), changes to the McGuire Nuclear Station, Units 1 and 2 and Catawba Nuclear Station, Units 1 and 2 licensing bases that materially affect the content of this Application will be identified by Duke at least annually during the NRC's review of the Application. Duke currently intends to provide the first update to the Application in June 2002.

Duke has worked with the nuclear industry, the Commission, and its staff for a number of years to develop a stable and predictable license renewal process. This Application reflects the results of a considerable investment of time on behalf of Duke, the NRC, and the industry. Duke appreciates the collective efforts devoted to this Application to date. Our goal is to facilitate a thorough, yet efficient, review of this Application so as to avoid unnecessary delay in the issuance of the requested renewed operating licenses. We stand ready to provide whatever assistance and information is necessary to achieve this goal. In this regard, Duke would like to propose periodic meetings between its management and the NRC's License Renewal Project Directorate, with the goal of establishing an expeditious process for resolving any issues arising during the course of the Application review process.

Very truly yours,

M. S. Tuckman

M. S. Tuckman

Attachments: (14 Copies of the Application)

Affidavit

M. S. Tuckman, being duly sworn, states that he is Executive Vice President, Nuclear Generation Department, Duke Energy Corporation; that he is authorized on the part of said Corporation to sign and file with the U. S. Nuclear Regulatory Commission this Application to Renew the Facility Operating Licenses of McGuire Nuclear Station and Catawba Nuclear Station, Docket Nos. 50-369, 50-370, 50-413 and 50-414, and that all the statements and matters set forth herein are true and correct to the best of his knowledge and belief. To the extent that these statements are not based on his personal knowledge, they are based on information provided by Duke employees and/or consultants. Such information has been reviewed in accordance with Duke Energy Corporation practice and is believed to be reliable.

M. S. Tuckman

M. S. Tuckman, Executive Vice President
Duke Energy Corporation

Subscribed and sworn to before me this 13TH day of June 2001.

Mary P. Nelms

Notary Public

My Commission Expires:

JAN 22, 2006

xc: (w/ Attachment)

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