



Electric Power
Research Institute

U.S. NRC

Leadership in Science and Technology

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October 15, 1990

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Attention: Docketing and Servicing Branch

Subject: Proposed Rule - Nuclear Power Plant License Renewal (55FR29043)
Request for Comments

Dear Mr. Chilk:

The Electric Power Research Institute (EPRI) is pleased to offer comments on the Nuclear Regulatory Commission's proposed rule for nuclear power plant license renewal as published at 55FR29043 on July 17, 1990, and commends the NRC staff for moving promptly towards the establishment of definitive requirements for license renewal.

Studies of age-related degradation of important nuclear power plant equipment have been an on-going element of EPRI research since its formation in 1973. In view of the critical importance of continued nuclear power plant operation to US utilities and the nation, a research program on nuclear power plant life extension was initiated in the early 1980's. This program, in direct cooperation with the US Department of Energy (DOE), has progressed from general feasibility studies to lead plant projects aimed at demonstrating the license renewal process through receipt of renewal licenses for both a boiling water reactor and a pressurized water reactor.

EPRI, together with DOE, has provided direct technical support to the Nuclear Management and Resources Council (NUMARC) initiative on nuclear power plant license renewal. EPRI endorses and fully supports the comments submitted by NUMARC to the NRC on the proposed license renewal rule, and would like to offer these additional comments for NRC consideration.

Current Licensing Basis

EPRI agrees with the NRC that the existing licensing basis for a reactor is the appropriate foundation for license renewal of that facility and that age-related degradation of plant safety equipment is the only issue which should be

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considered for license renewal. We are concerned, however, with the statement of the two key license renewal principles as given in the Statement of Considerations accompanying the proposed license renewal rule. These could be interpreted to mean that age related degradation management of important safety equipment is not a part of a plant's current licensing basis. On the contrary, we believe that as a result of current NRC regulations and licensee programs, adequate measures are in place today for managing degradation of plant safety equipment. We would urge the NRC to return to the two license renewal principles as given in the Advanced Notice of Proposed Rulemaking (54FR41980), namely:

First Principle

The "Current Licensing Basis" at a specific reactor provides and maintains a level of safety for operation during the initial term that is sufficient to provide adequate assurance of the public health and safety and common defense and security, and that the same level of safety is also adequate for continued operation during any renewal period.

Second Principle

Any license renewal policy must provide assurance that the level of safety provided by a nuclear power plant's current licensing basis will not degrade during the renewal period.

Selection of Alternative B versus A

EPRI believes that while Alternative A as identified in NUREG 1362 would be adequate for license renewal, Alternative B with its rule-prescribed assessment of age related degradation of plant equipment important to license renewal is a more conservative and prudent approach. This assessment, however, should be focussed on important plant safety equipment and give appropriate recognition to the many current programs in place today for the management of age-related degradation.

Integrated Plant Assessment

The Integrated Plant Assessment as outlined in the proposed rule is excessive. The scope of systems and structures important to license renewal as defined in the proposed rule is unduly broad and the requirements for an established effective program are too prescriptive. We would urge the NRC to structure the Integrated Plant Assessment in line with the NUMARC Methodology to

Evaluate Plant Systems, Structures and Components for License Renewal which has been utilized extensively in the two license renewal lead plant projects.

Specifically we would urge that the NRC adopt the definitions of "systems, structures and components important to license renewal" and "established effective programs" as given in the NUMARC comments on the proposed license renewal rule.

Documents relied upon to perform the Integrated Plant Assessment should be made available for NRC review, but we do not believe, based on the experience of the lead plant projects, that a plant's current licensing basis needs to be compiled in its entirety in order to perform the integrated assessment. The requirement to maintain all documents describing the current licensing basis in an auditable and retrievable form should be removed from the license renewal rule.

Established Effective Programs

The proposed rule appropriately recognizes the existence of "established effective programs" for the management of age-related degradation in nuclear power plants. EPRI supports NUMARC's identification of a number of problems with the Commission's specific definition thereof, which is restrictive to the point that certain effective licensee programs may not be credited. We wish to point out that many established effective programs have been identified in a series of ten technical Industry Reports developed by EPRI and the DOE. These reports, submitted by NUMARC to the NRC for review and approval, supply the technical bases for evaluation of plausible age-related degradation, during the present and extended operating term, on components of high interest to the industry and NRC alike. Despite agreement that these reports meet the criteria for topical reports based on their future reference by reactor licensees applying for a renewed license, broad reference of such reports and their role in the license renewal process are absent from the supporting documents accompanying the proposed rule. In particular, the industry's conclusions in each of these reports demonstrates that most age-related degradation mechanisms potentially affecting critical components are managed by programs currently effective today which will continue to remain effective during the license renewal term. The current methods employed in the administration of these programs provide an adequate level of safety today and will continue to do so in the future. Redefining "effectiveness", programmatic enhancements, and other embellishments do not change the technical adequacy of these programs. Regulatory oversight programs such as the NRC Systematic Assessment of Licensee Performance (SALP) provide and will continue to provide assurance to

the Nuclear Regulatory Commission that an adequate level of safety is maintained. We urge the NRC to approve these reports in an expeditious manner and to resist new "criteria" that seeks to add incremental levels or margins of safety above and beyond that required of licensees not requesting license renewal. Consistent with the current licensing basis being the foundation for license renewal, it is our understanding that the licensing basis for a plant current at the time of renewal will assure an adequate level of safety during the term of the renewal license except to the extent that aging-related issues require additional consideration. That is, the License Renewal Rule should not seek to enhance the level of safety at a plant beyond that which had been previously considered adequate. EPRI maintains that the definition proposed by the rule for an established effective program fails to recognize and thereby potentially discredits the programs existing today that adequately manage aging. The results of NRC research under the NPAR Program do not support unique requirements for license renewal. Aging management recommendations from this program which are demonstrated to be cost-effective are just as applicable to those plants not seeking license renewal as those that are. The Commission's Policy on Maintenance does not explicitly address the need to manage age-related degradation. This would suggest that one need not redefine maintenance, surveillance, inspection, etc., programs to maintain plant equipment. Such programs have taken aging into account long before the advent of the NPAR program. EPRI maintains that the definition contained in the proposed rule for established effective programs is inappropriate, and recommends that the NRC adopt the NUMARC definition.

NRC Question 1

Are there any specific equipment items, equipment categories, or topics that should, by rule, be excluded from review under the age-related degradation program requirements of the proposed rule? If so, what equipment or topics should be excluded, and what would be the justification for such exclusion?

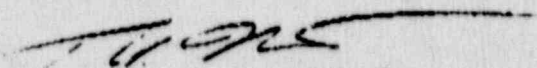
We do not believe that any plant equipment important to license renewal should be excluded from review under the age-related degradation program requirements of the proposed rule. However, as indicated previously, we believe the scope of plant equipment included in the definition of "important to license renewal" is unnecessarily broad and would urge the NRC to adopt NUMARC's definition of equipment "important to license renewal". Furthermore we believe that equipment important to license renewal which is routinely or periodically replaced based on plant specific or industry experience need not be subjected to detailed aging analysis or evaluation. Periodic or

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routine replacement of equipment should be directly recognized as an established effective program for managing aging.

We appreciate this opportunity to provide comments on the proposed rule and encourage NRC to maintain its schedule for publication of a final rule for license renewal in May, 1991.

Sincerely,



T.U. Marston, Director
Engineering and
Operations Department

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