YANKEE ATOMIC ELECTRIC COMPANY (55FR 29043) TWX 710 380 7619



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COUNTERED SECRETARY

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October 11, 1990 SPS 90-168 FYC 90-017

Secretary of the Commission U.S. Nuclear Regulatory Commission Washington, DC 20555

Attention:

Docketing and Service Branch

Subject:

Nuclear Power Plant License Renewal Proposed

Rulemaking (55FR29043)

Dear Sir:

Yankee Atomic Electric Company (Yankee) appreciates the opportunity to comment on this proposed rule regarding license renewal for commercial nuclear power plants. Yankee is the owner and operator of the first plant that will chronologically require a renewal license. Yankee Nuclear Power Station is also the lead PWR plant selected by the Department of Energy and the Electric Power Research Institute to demonstrate the validity of the license renewal process. Furthermore, Yankee's Nuclear Services Division provides engineering and license ing services to other nuclear power plants in the Northeast, including Vermont Yankee, Maine Yankee, and Seabrook.

As you are aware, Yankee has been an active participant in the NUMARC NUPLEX Working Group since its inception. We have been extensively involved in the development of the NUMARC comments, and we fully endorse those comments, particularly the annotated rule provided with the comments. We would like to take this opportunity to reiterate and add to the comments provided by NUMARC and previously by Yankee.

Yankee continues to stress that the success of license renewal depends on a rule that focuses entirely and solely on age-related degradation of significant plant components for which remedial actions are necessary in the renewal period. The proposed version of the rule appears to go substantially beyond this scope because systems potentially drawn in by a systems interaction evaluation would be included by the proposed definition of "Systems, Structures, and Components Important to License Renewal." Further, once included, most components in these systems would require an in-depth analysis, similar to that done for Equipment Qualification.

The industry has made the case to the ACRS and the Commission on several occasions that not all components that are important to license renewal

require an in-depth analysis to ensure the continued capability to perform their safety function. Station batteries are a classic example. They are rigorously monitored and tested throughout their lifetime and replaced when found not to meet performance criteria. Such replacements take place several times during a license term. Yet, the proposed rule, when read with the regulatory conservatism typically reserved for regulations, continues to require in-depth analyses for all components important to license renewal. Such an approach ignores the fundamental premise of license renewal regarding adequacy of the current licensing basis, gives minimal credit for existing licensee programs and activities, and takes minimal credit for continuing NRC oversight. The rule instead creates the foundation for a research program that is virtually unbounded. We would offer that absent the proper focus on those significant plant components that require remedial actions to manage age-related degradation during the renewal term, license renewal might not be a viable option for many facilities.

Our additional comments regarding the proposed rule follow. A mark-up of the proposed rule, as submitted by NUMARC, is incuded for your convenience (Attachment 1).

Compilation of the Current Licensing Basis

We continue to oppose the requirement to compile the Current Licersing Basis (CLB) for several reasons:

The lead plants have demonstrated that only limited parts of the CLB
are needed for the plant analysis. For example, the applicant may
use piping and instrumentation diagrams, operations manuals, and
knowledgeable plant personnel to identify systems, structures, and
components important to license renewal. None of these aids are
found in the CLB.

The information that is necessary to implement the integrated plant assessment is available in well docmented sources which are updated and controlled in accordance with regulatory requirements, such as 10CFR, Sections 50.71 and Part 50, Appendix B, and licensee administrative requirements. A double standard that takes credit for NRC regulatory oversight during the initial license term, but does not take credit for such oversight during the license renewal process, appears to be inappropriate.

2. Compilation invites, and almost demands, an NRC review for adequacy. The only real difference between the proposed rule and previous versions of the rule is that the entire CLB is no longer required as part of the application. Instead, the rule requires that a list of documents identifying portions of the CLB relevant to the integrated plant assessment be submitted. Such a measure appears to have been employed by the NRC in the mistaken belief that this new requirement will insulate the license renewal process from

challenges to CLB adequacy. Since the finding required of the NRC (Section 50.29) is that "the activities authorized by the renewal license can be conducted in accordance with the current licensing basis," the rule seems to invite such challenge for each plant.

3. There has been and continues to be no justification for requiring compilation of the CLB. While it is generally true that plant CLBs are not concisely catalogued in only one or two documents, it is also true that plant CLBs reside within the design and licensing documents that are part of formal NRC dockets and plant-specific document control systems. Plant-specific document control systems are subject to regulatory controls under 10CFR50, Appendix B, Quality Assurance. The most important CLB documents, that is, the FSAR and Technical Specifications, are further subject to regulatory controls under 10CFR50.71(e) and 10CFR50.59. Compliance with these regulatory requirements is reviewed and assessed on a routine basis by NRC Staff and inspectors throughout the life of the plant. If deficiencies, such as failure to translate regulatory requirements and commitments into specifications, drawings, procedures, or instructions, are identified, the NRC takes appropriate action to ensure that such deficiencies are corrected.

Given the continuous oversight provided by the many NRC regulatory requirements and licensee administrative programs for ensuring implementation, there exists no justification to require compilation of the CLB currently or for license renewal.

Adequacy of Current Programs

The definitional requirements of "Established Effective Program" are inconsistent with the fundamental principle that the level of safety provided by the CLB is adequate. For example, there are currently programs being implemented by licensees to manage age-related degradation. Not all of these programs are part of the CLB as defined, nor are all of these program documents subject to review by on-site review committees. Though all implementation procedures would be administered in accordance with plant administrative controls. Since the level of safety provided by the CLB is adequate, there is no need to suddenly require that these non-CLB programs/activities be incorporated into the CLB and/or be reviewed by on-site review committees. Furthermore, the requirement to monitor the assumptions which were utilized in performing the assessments for age-related degradation is also inconsistent with the fundamental principle of license renewal. We agree with NUMARC that a unique approach to monitoring the assumptions used for license renewal versus that used to monitor licensee activities today is not necessary.

Integrated Plant Assessment

We agree with NUMARC that the integrated plant assessment, as detailed in the proposed rule and supporting documents, is too broad, and the depth of the

evaluations to be performed on components which are important to license renewal is more extensive than necessary to support the finding that significant age-related degradation will be effectively managed during the renewal term. We urge NRC to revise their approach to the integrated plant assessment by adopting a process that progressively intensifies the aging assessment by focusing on safety significance of components, significant age-related degradation, and need for management and/or mitigation of significant age-related degradation measures during the renewal period. A means to achieve this has been provided by NUMARC in their formal comments.

Hearings

At the second of three hearings held recently by the Congressional Subcommittee on Nuclear Regulation to examine the external obstacles to nuclear power, Senator Alan Simpson stated that while public participation must not be eliminated, at some point, "the babbling must be closed off." We agree with Senator Simpson that public participation is important. Public participation helps to ensure the validity of the licensing process. However, like Senator Simpson, we believe that debate on issues cannot be allowed to continue as it has in the past to impede the rendering of a decision.

Given the importance of license renewal to our nation's energy security, it is imperative that license renewal remain a viable option. In order to protect this option, the NRC must provide some certainty to the hearing process. Licensees can take very little comfort in the "timely renewal" provision of 10CFR, Part 54. Utilities need to know whether renewal will be granted well before the expiration of their initial licenses so that in the case of denial, sufficient time remains to implement alternatives for replacement capacity. Timely renewal does not recognize this need. Furthermore, although the plant may be permitted to operate under timely renewal, decisions regarding capital investments and issues involving staffing will be held in suspension until a final decision is rendered. These potentially serious problems can be easily avoided by requiring in this rule that the hearing boards identify the hearing schedule and hold all parties to that schedule. We urge the Commission to adopt such a requirement for license renewal.

In this regard, we believe that NUMARC has not gone far enough. We support the suggestion that an explicit scope should be defined for the hearings. However, without the companion requirement that a schedule also be established, the spectre of endless and pointless debate remains.

Backfit Controls

NUMARC's suggestion that the rule codify the Commission's wishes regarding applicability of the Backfit Rule is unimpeachable. The arguments presented in the supplementary information accompanying the rule merely explain how staff actions during the review of a renewal application might conform to specific provisions in the Backfit Rule. At no point does the

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proposed rule establish the Backfit Rule as a constraint on the staff during a renewal term as it is during the initial term. Further, it seems unreasonable to prevent licensees from meeting staff imposed requirements in a cost-effective manner if equivalent safety is provided by different alternatives. For all these reasons, the explicit formulation of the Backfit Rule suggested by NUMARC in Section 54.22 is a vast improvement over the rule as proposed.

Findings

NRC proposes that a renewal license can be granted upon making the finding that age-related degradation of SSCs important to license renewal has been addressed in a manner such that operations during the renewal term can be "conducted in accordance with the CLB." While we do not believe it was the NRC's intent, such a finding unnecessarily elevates the CLB to the level of Technical Specifications. This status would require that any change made to the CLB be approved by the NRC prior to implementation. In other words, it appears as though the NRC would suddenly become involved with the day to day decisions made to operate a plant safely because the flexibility afforded plant operators by 10CFR50.59 would no longer be available. The finding should instead reflect the need to address age-related degradation in a manner such that operations during the renewal term can be "conducted in accordance with the regulations." We urge the Commission to adopt this change.

In closing, we wish to commend the NRC for vigorously addressing the need for a license renewal rule. Development of a rule has been a complicated process. We are hopeful that the staff, in reviewing comments, will be persuaded by the proposed reformulation of the rule. The suggested changes permit full use of the simplicity and power resident in application of the CLB concept to create a logical and comprehensive license renewal process.

Sincerely.

Donald W. Edwards

Director of Industry Affairs

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Attachment

1	54.15	Specific examptions.
2	54.17	Filing of application.
3	54.19	Contents of application - general information.
4	54.21	Contents of application - technical information.
5	54.22	Backfitting ⁶
6	54.23	Contents of application - environmental information.
7	54.25	Report of the Advisory Committee on Reactor Safeguards.
8	54.27	Hearings.
9	54.29	Standards for issuance of a renewed license.
0	54.31	Issuance of a renewed license.
1	54.33	Continuation of current licensing bases and conditions of renewed
2		license.
3	54.35	Requirements during term of renewed license

Authority: Secs. 102, 103, 104, 161, 181, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 1244, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, 202, 206, 88 Stat. 1242, 1244, as amended (42 U.S.C. 5841, 5842).

Additional recor | | recordkeeping requirements.

20 General Provisions

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A new § 54.22 Backfitting has been added to the proposed rule, codifying the Commissions treatment of § 50.109 described in the Statement of Considerations.

1 § 54.1 Purpose and scope.

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This part governs the issuance of renewed operating licenses for nuclear power plants licensed pursuant to Section 103 or 104b of the Atomic Energy Act of 1954, as amended (68 Stat. 919) and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242).

§ 54.3 Definitions.

(a) As used in this part,

"Aging mechanisms" are the physical or chemical processes that result in aging degradation. These mechanisms include but are not limited to fatigue, erack growth, corrosion, erosion, wear, thermal embrittlement, radiation embrittlement, biological effects, creep, and shrinkage.

"Age-related degradation" means a change in a system's, structure's, or component's physical or chemical properties resulting in whole or part from one or more aging mechanisms. Examples of change due to age related degradation include changes in dimension, ductility, fatigue capacity, fracture toughness, mechanical strength, polymerization, viscosity, and dielectric strength.

⁷ Specific mechanisms or measures of age-related degradation are still controversial, and not appropriate for a definition. The fundamental cause and effect relationship, however, is recognized.

Specific mechanisms or measures of age-related degradation are still controversial, and not appropriate for a definition. The fundamental cause and effect relationship, however, is recognized.

"Significant age-related degradation" means that level of deterioration of the physical or chemical properties of a system, structure or component that would impair its ability to perform any of its safety functions."

"Current licensing basis" (CLB) means the NRC's requirements imposed by the NRC on a particular nuclear power plant at the time that the initial license for that power plant was granted and the licensee's written commitments for complying with those requirements (including modifications and addition to such commitments) at the time the initial license was granted. including those required to be documented in either the licensee's initial operating license application or Final Safety Analysis Report (FSAR) .-Additionally, it includes all modifications and new requirements imposed by the NRC and modifications and new commitments made by the licensee during the period of plant operation up to filing of the license renewal application and remaining in effect at the time of application that are part of the docket for the facility's license. These plant-specific requirements-and-commitments (and modifications and additions thereto) include, but are not limited to. compliance with consist of the Commission's regulations as prescribed in 10 CFR Parts 2, 19, 20, 21, 30, 40, 50, 51210 55, 72, 73, and 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. In addition, the current licensing basis includes written commitments remaining in effect and made in docketed licensing correspondence such as

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Significant age-related degradation is another term which needs to be defined, since not all age-related degradation is significant.

¹⁰ Part 51 should also be included.

licensee responses to NRC bulletins, generic letters, and enforcement actions that remain in effect at the time of application¹¹.

"Established effective program" means a documented program that assumes appropriately addresses the effects of significant age-related degradation, thereby providing reasonable assurance that a system, structure, or component important to license renewal will continue to perform the 4th safety functions described in the definition of "Systems, structures, and components important to license renewal." during the renewal term will not fail in such a way that it could prevent successful accomplishment of a safety function by another system, structure, or component; and will continue to function with sufficient reliability to maintain the licensing basis. This Established effective programs may shall include as appropriate, but are is not limited to, inspection, surveillance, preventative or corrective maintenance, trending, testing, recordkeeping, replacement, refurbishment, qualification, and the

Section 54.3 of the Proposed Rulemaking, we find that a change is necessary to reflect the fact that the current licensing basis changes during the initial license term and will continue to change during the renewal term in order to ensure an acceptable level of safety. During the review of the license renewal application, changes may occur for several reasons; for example, NRC may issue new requirements under 10CFR50, or the licensee may process a Technical Specification amendment for a new fuel cycle. The fact is that the current licensing basis will continue to change. Therefore, the definition should reflect the changing nature of the current licensing basis.

The definition of current licensing basis should be changed in several respects. First, the revised definition would not "freeze" the CLB at the time that the license renewal application is filed. Freezing the CLB would be inconsistent with NRC practice and would make continued plant operation difficult and perhaps impossible by causing plants to adhere to less-safe current licensing bases. The revised definition would also assure that the CLB included only those commitments that were in writing, on the docket, and remained in effect.

- assessment of operational life for the purpose of assuring that the system,

 structure, or component will continue to perform its safety function timely

 mitigation of the effects of aging degradation¹². This program must:
 - (i) Be documented in the FSAR, approved by onsite review committees, and implemented in accordance with plant administrative procedures by the facility operating procedures 13,

Testing, qualification and preventative and corrective maintenance should be added to the list of items that programs can include.

Reference to FSAR should be removed since all programs are not typically included in the FSAR. Established Effective Programs should not need to be documented in the FSAR. There are many program manuals (e.g. fire protection or inservice inspection manuals) that describe programs which satisfy all other criteria of the definition and legitimately qualify programs which effectively manage aging. Many older FSARs have been maintained in their original format (in accordance with 10CFR50 Part 50.71(e), the FSAR update rule) and therefore have been supplemented by program documents when new program requirements were addressed. Many processes are controlled by the Administrative Controls section of the plant's Technical Specifications. Changes to plant procedures to reflect commitments made in response to Generic Letters, Bulletins, I & E inspection findings, etc. are typically made under

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¹² The definition of "Established Effective Program" contained in the proposed rule included words which required a program to assure that a SSC would not fail in such a way that it could prevent successful accomplishment of a safety function by another SSC. To meet this criteria a systems interaction review would be necessary. The systems interaction issue, Unresolved Safety Issue A-17 was resolved via Generic Letter 89-18 with no specific action required by the licensees. Guidance provided in Generic Letter 89-18 will continue to be taken in account during the renewal term as it has been in the initial licensing term. No additional requirements should be necessary. The scope of license renewal should be limited to those systems and structures required to perform a safety function by regulation. The definition also contains words which require that an SSC continue to function with sufficient reliability to maintain the licensing basis. This requirement is vague and would be difficult to demonstrate. It could be interpreted to require a PRA which establishes reliability numbers on a system or component level. This would be inconsistent with other portions of the rulemaking package which explicitly state that a PRA is not required for license renewal. The wording discussed above should be removed and replaced with words which correlate to the identification of safety functions under the definition of SSCs important to license renewal.

(ii) Ensure that	all system, struct	re, or the compo	nent's safety
functions are properly a	ddressed considering	g the effects of	and significant
age-related degradation,	as appropriate and	properly evalua	ted by the program
procedures, and14			

(iii) Establish acceptance criteria against which the need for corrective action is to be evaluated and require that timely corrective action be taken when these criteria are not met.

"Nuclear power plant" means a commercial nuclear power facility of a type described in 10 CFR §§ 50.21(b) or 50.22.

"Renewal term" means the period of time which is the sum of the remaining number of years on the operating license currently in effect, plus the additional amount of time beyond the expiration of the operating license (not to exceed 20 years) which is requested in the renewal application. The total number of years for any renewal term shall not exceed 40 years.

"Systems, structures, and components (SSCs) important to license renewal" are:

(i) Safety-related SSCs, which are those relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or

this section. Part 54 should recognize these controls and not establish a new requirement.

As previously written an applicant would be responsible for evaluating the age-related degradation of a component that is periodically replaced on a schedule that assures the component will continue to perform its safety function. Since replacement is an effective program such an evaluation should not be warranted.

mitigate the consequences of accidents that could result in potential offsite consequences exposure comparable to the 10 CFR Part 100 guidelines. Design basis events are defined the same as in 10 CFR 50.49(b)(1).

(111) (+++)—A++ Nonsafety-related SSCs systems, structures and components that are necessary to meet the requirements of used in a sofety analysis or plant evaluation for the licensing basis. This would include, but not like to, systems, structures and components identified in the Final Safety Analysis Report, the technical specifications, and the evaluations submitted to show compliance with the Commission's regulations such as ATWS (10CFR50.62), Station Blackout (10CFR50.63), Pressurized Thermal Shock (10CFR50.61), and Fire Protection (10CFR50.48)—and Equipment Qualification.16

(ii) (iii) Any including Nonsafety-related SSCs required to support the performance of safety functions by the safety related systems identified in

¹⁵ The consequences of accidents are defined in terms of "offsite exposure," not "offsite consequences"

As previously written, this item would include all SSCs considered in a "... safety analysis or plant evaluation for the licensing basis." This would include any docketed correspondence on bulletins, generic letters or any general request made by the Staff to the licensee. These words greatly expand the scope of review beyond that necessary to provide a reasonable assurance of the continuing protection of the public health and safety. The SSCs required by this portion of the rule should only be those nonsafety-related systems that are used to satisfy regulations to perform specific safety functions. The Environmental Qualification rule (10CFR 50.49) specifies no requirements for additional systems and is inconsistent with the intent of this definition. The scope of license renewal should be limited to those SSCs required to perform a safety function by regulation. This is reflected in the rewording provided.

- 1 (1) above, whose failure could prevent satisfactory accomplishment of required
- 2 safety functions.17
- 3 (+v) Post accident menitoring equipment as defined in 10 SFR
- 4 50.49(6)(3).18

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- 5 (b) All other terms in this part have the same meaning set out in
- 6 10 CFR 50.2 or Section 11 of the Atomic Energy Act, as applicable.
- 7 § 54.5 Interpretations
- B Except as specifically authorized by the Commission in writing, no
- 9 interpretation of the meaning of the regulations in this part by any officer

- 10 or employee of the Commission other than a written interpretation by the
- 11 General Counsel will be recognized to be binding upon the Commission.
- 12 § 54.7 Written communications. 19

As previously written, this item would include any nonsafety-related system whose failure could prevent satisfactory accomplishment of a required safety function. This would require a systems interaction review. The systems interaction issue, Unresolved Safety Issue A-17 was resolved via Generic Letter 89-18 with no specific action required by licensees. Guidance provided in Generic Letter 89-18 will continue to be taken into account during the renewal term as it has been in the initial licensing term. No additional requirements are necessary.

This item includes Post-accident monitoring equipment as defined by 10 CFR 50.49(b)(3). This item should be deleted. The requirements contained in the previous three items will include those SSCs that are important to license renewal. The staff agreed with this position in response to a comment where they stated, "Upon further review, the staff believes that this explicit identification [of post accident monitoring equipment] is not necessary." (NUREG-1411 (June 1990)).

^{19 10}CFR 50.4 should be referenced in a similar manner as § 50.47, § 50.54 under Part 50 -- DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

1	All applications, correspondence, reports, and other written
2	communications shall be filed in accordance with applicable portions of 10 CF
3	50.4.
4	§ 54.9 Information collection requirements: OMB approval.
5	(a) The Nuclear Regulatory Commission has submitted the information
6	collection requirements contained in this part to the Office of Management and
7	Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980
8	(44 U.S.C. 3501, et seq.). OMB has approved the information collection
9	requirements contained in the part under control number
0	(b) The approved information collection requirements contained in thi
1	part appear in
2	§ 54.11 Public inspection of applications.
3	Applications and documents submitted to the Commission in connection
4	with renewal applications may be made available for public inspection in
5	accordance with the provisions of the regulations contained in 10 CFR Part 2
6	of this chapter.
7	§ 54.13 Completeness and accuracy of information.
8	(a) The completeness and accuracy requirements of 50.9(a) and (b) apply
9	to the license renewal application and the renewal term granted under
0	PACTURAL
1	(b) Following submittal of the license renewal application, the
2	applicant will inform the NRC of any changes to the current licensing basis

	that materially affect the contents of the license renewal application. Any
?	such notification will be provided in a timely manner in the form of a written
3	amendment, submitted to the Director of Nuclear Reactor Regulation,
1	identifying the affected section of the application and identifying the exact
5	change.20

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee must be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification must be provided to the Administrator of the appropriate Regional Office within 2 working days of identifying the information. This requirement is not applicable to information which is

Just as the definition of "Current Licensing Basis" should be revised to reflect its changing nature, so too should the proposed rule be revised to include an administrative step that would require the applicant to notify the NRC staff (responsible for the review of the license renewal application) of changes to the CLB that impact the applicant's integrated plant assessment, or are otherwise related to activities required by Part 54. Notification would be in the form of written correspondence on an as-needed basis.

- 1 already required to be provided to the Commission by other reporting or
- 2 updating requirements.21
- 3 § 54.15 Specific exemptions.
- Exemptions from the requirements of this part may be granted by the
- 5 Commission in accordance with § 50.12 of this chapter.
- 5 § 54.17 Filing of application.
- 7 (a) The filing of an application for a renewed license must be in 8 accordance with Subpart A of 10 CFR Part 2 and §§ 50.4 and 50.30 of 10 CFR
- 9 Part 50.
- 10 (b) Any person who is a citizen, national, or agent of a foreign
- 11 country, or any corporation, or other entity which the Commission knows or has
- 12 reason to believe is owned, controlled, or dominated by an alien, a foreign
- 13 corporation, or a foreign government, is ineligible to apply for and obtain a
- 14 renewed license²².
- 15 (c) An application for a renewed license may not be submitted to the
- 16 Commission earlier than 20 years before the expiration of the operating
- 17 license currently in effect.
- 18 (d) An applicant may combine an application for a renewed license with
- 19 applications for other kinds of licenses.

The requirements of Section 50.9 need not be spelled out in Section 51.13. Like other sections of Part 50, Section 50.9 should be referenced as being applicable to the license renewal application and the renewal term.

^{23 22}This part deals with renewed licenses and, as such should only address renewed licenses

- (e) An application may incorporate by reference information contained in previous applications for licenses or license amendments, statements, correspondence or reports filed with the Commission; provided that such references are clear and specific.
- (f) If the application contains Restricted Data or other defense information, it must be prepared in such a manner that all Restricted Data and other defense information are separated from unclassified information, in accordance with § 50.33(j) of Part 50.
- (g) As part of its application and in any event prior to the receipt of Restricted Data or the issuance of a renewed license, the applicant shall agree in writing that it will not permit any individual to have access to Restricted Data until an investigation is made and reported to the Commission on the character, association, and loyalty of the individual and the Commission shall have determined that permitting such person to have access to Restricted Data will not endanger the common defense and security. The agreement of the applicant in this regard is part of the renewed license, whether so stated or not.
- 18 § 54.19 Contents of application general information.
- Each application shall provide the information specified in § 50.33(a)
 through (e), (h), (i) of Part 50. Alternatively, the application may
 incorporate by reference other documents that provide the information required
 by this section.
- 23 § 54.21 Contents of application technical information.

Each application must include a supplement to the Final Safety Analysis Report (FSAR) which presents the information required by this part. The FSAR supplement must include an evaluation of the aging mechanisms that are known to be present and that result in significant age-related degradation of the plant's systems, structures, and components important to license renewal²³, and a demonstration that the effects of such degradation will be effectively managed throughout the renewal term. Each FSAR must contain the following information:

(a) Integrated plant assessment. An integrated plant assessment will be conducted which demonstrates that significant age-related degradation of the facility's systems, structures, and components important to license renewal has been identified, evaluated, and accounted for as needed to assure the capability of the systems, structures and components to perform their safety function(s) during the renewal term that the facility's current licensing basis will be maintained throughout the term of the renewed license²⁴. The "Methodology to Evaluate Plant Systems, Structures and Components for license renewal, NUMARC 90-1 October 1990, is an acceptable

Not all of a facility's systems, structures and components contribute to plant safety. Only those components which are important to license renewal need to be considered under the scope of the Integrated Plant Assessment. This also limits the scope to significant age-related degradation as defined in § 54.3(a).

The purpose of this requirement is to ensure that the subject structures and components will continue to perform as designed; in other words, they will continue to perform during the renewal term the same safety functions required for the initial term. Therefore, § 54.21(a)(5) should be tied to the safety function of the structure or component.

method.25 Each license renewal applicant shall identify and justify any changes in the current licensing basis associated with age-related degradation. Each license renewal applicant shall reference, by listing those compile a list of documents identifying portions of the current licensing basis relevant to in the integrated plant assessment, to be submitted as part of the application, and maintain all documents describing the current licensing basis in an auditable and retrievable form. 26 Each applicant shall review use the current licensing basis compilation where appropriate for the purpose of determining the systems, structures, and components to be evaluated

The industry has developed a method of performing an integrated plant assessment. This methodology has been submitted to the NRC for review and comment. Reports detailing its use and the results for both lead plants have been submitted to the Staff for their review and comment. This methodology is consistent with the principles as outlined in the rulemaking package and should be acceptable as one way of completing the Integrated Plant Assessment. The referenced version of the methodology would be that which a final SER is written.

Since the CLB is adequate, as has been set forth in the statement of considerations and in various portions of the proposed rule, neither the compilation of the CLB nor compilation of a list of CLB documents for the purpose of conducting the IPA is unnecessary. No such compilation is required for the determination of SSC's important to safety and thus subject to environmental qualification (Part 50.49) which the definition of SSC's important to license renewal parallels. If such a compilation for environmental qualification under the current licensing basis was not required, it is not clear why such a compilation should be required for the identification of SSC's important to license renewal.

- 1 and the acceptance criteria to be used in the integrated plant assessment.²⁷
 2 This assessment must:
 - (1) Describe the applicant's methodology, for the identification of all SSCs systems and structures²⁸ important to license renewal, as defined in § 54.3(a), and list the identified SSCs systems and structures.
 - (2) Describe the applicant's methodology, including selection criteria, for determining components the identification of those structures and components that are constituent elements of the SSCs systems and structures on the list from paragraph (a)(1) of this section that contribute to the performance of an identified system or structure listed SSC's safety function or whose failure could directly prevent²⁹ an identified system or

In § 54.21(a), prior to modification, each applicant was required to use the current licensing basis in identifying those SSCs to be evaluated and the acceptance criteria to be used in the Integrated Plant Assessment (IPA). All of the CLB is not used to make the determination in Step (1) and/or the remaining Steps (2), (3) and (4). The CLB should be used where appropriate. However, the use of the CLB will differ depending on the step in the industry methodology and the SSC or commodity group (e.g., MOVs, piping, or cables) being assessed. Furthermore, when part of the CLB is used, it does not mean that the applicant must reverify the design basis or reconfigure the plant. Such a requirement would be contrary to the key principle that the current licensing basis provides an acceptable level of safety.

²⁸ Paragraph (2) is redundant to paragraph (1) as originally written. The intent appears to be to identify those components of identified systems and structures which are important to the safety function of the systems and structures important to license renewal. But since paragraph (1) identifies "SSC's" the second step has already been done. 54.21(a)(1), (2), (3) and (4) have been rewritten to identify first the systems and structures, then identify the constituent components, noting that structures are composed of components as well.

The requirement to perform a review of a component failure that could prevent an identified system or structure from performing its intended safety function could be interpreted to require a systems interaction review. The systems interaction issue, Unresolved Safety Issue A-17 was resolved via Generic Letter 89-18 with no specific action required by the licensees.

structure listed SSC from performing its intended safety function, and list such identified structures and components.

- (3) Describe the applicant's methodology for the identification of those structures and components identified in paragraph (a)(2) of this section that are subject to an established effective program as defined in § 54.3(a), which will continue to ensure provide reasonable assurance of the capability of the structures and components to perform their safety functions during the renewal term, and list such identified structures and components and the associated established effective programs.
- (4)(i) For those structures or components included on the list from identified in paragraph (a)(2) of this section but not included on the list from which are not subject to established effective programs in paragraph (a)(3) of this section, describe and provide the bases for actions taken or to be taken to manage the age related degradation identify those for which agerelated degradation is not potentially significant with regard to the ability of the component to perform its safety function and provide a basis for that conclusion. Or demonstrate, by evaluation, that the age related degradation is not significant with respect to the current licensing basis.
- (++5) For those components remaining, describe and provide the basis for Aactions to be taken to further assess or manage the potentially significant manage age-related degradation could include but are not limited to

Guidance provided in Generic Letter 89-18 will continue to be taken in account during the renewal term as it has been in the initial licensing term. No additional requirements should be necessary.

[&]quot;ensure" should be replaced with "provide reasonable assurance of" this phrase more correctly represents the necessary demonstration.

maintenance, component replacement, or refurbishment, modification of

2	operating practices; or establishment of a program to evaluate and trend
3	effects of the degradation during the renewal term. Actions to assess or
4	manage potentially significant age-related degradation, may include, but are
5	not limited to:
6	(1) Further analysis to demonstrate that the age-related degradation is
7	not significant to the component safety function,
8	(ii) Further analysis to demonstrate that the failure of the component
9	to perform its safety function is not significant to plant safety,
10	(111) Replacement or refurbishment of the component on a schedule that
11	precludes age-related degradation to the component from being significant to
12	the component safety function, or
13	(IV) Instituting practices that manage component age-related degradation
14	consistent with the criteria for an established effective program.31
15	The basis of any action could include information concerning the component
16	design requirements, functions, environmental conditions, the degradation
17	mechanisms, and any other relevant information as necessary to demonstrate
18	that the action will be effective in ensuring the will continue to ensure the
19	safe operation of the plant.

Steps 4(i) and 4(ii) are two discrete steps and should be separated. Components which have made it to this point should first be evaluated to determine if age-related degradation is of actual significance. Following that determination, those components for which the <u>insignificance</u> of age-related degradation can not demonstrated will be evaluated to a greater level of detail utilizing one of the methods described.

- (b) Exemptions. A list of all plant specific exemptions granted 2 pursuant to 10 CFR 50.12, and reliefs granted pursuant to \$ 50.55(a)(3).32 3 For those plant specific exemptions granted pursuant 10 CFR 50.12 and reliefs that were granted on the basis of an assumed explicit service life or period of operation bounded by the original license term of the facility, or otherwise related to SSCs subject to significant age-related degradation, a justification for continuing these exemptions and reliefs must be provided.
 - Plant modifications. A description of any proposed modifications (c) to the facility, its Technical Specifications33 or its administrative control procedures resulting from the evaluation or analysis required by paragraph (a) or (b) of this section.

§ 54.22 Backfitting

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³² Only those plant specific exemptions which are time dependent should be evaluated and provided to the NRC. Providing a list of all exemptions is not consistent with the scope of license renewal. Relief requests pursuant to 50.55(a)(3) are reviewed regularly at 10 year intervals as part of the Inservice Inspection Program. As such any time dependencies would have to be reviewed and justified every 10 years as part of that submittal. This precludes the need to review those as part of the license renewal process.

³³ Plant modifications may require a changes to the technical specifications. If a change is necessary a description associated with the plant modifications required for license renewal should be included here.

³⁴ In the Statement of Considerations on page 43 it is pointed out the extent to which § 50.109 applies to license renewal. Unfortunately, although these views are clearly expressed in the Statement of Considerations, they are not reflected in the rule itself. The rule should make clear how the Backfit rule should be used during the review of a license renewal application.

^{§ 54.22} has been written such that those structures and components. which are properly screened (either dispositioned as a result of current effective programs, treated by additional aging management techniques or for which age-related degradation is not significant), should be acceptable for

1	(a) During the review of a renewal application, the provision of
2	50.109 shall apply as follows:
3	(1) Staff initiated Backfits proposed as required to assure adequate
4	protection or conformance with written commitments by the licensee arising
5	from the plant analysis under steps (a)(3), (a)(4) or (a)(5) of Section 54.21
6	shall be governed by 50.109(a)(a)
7	(2) All other proposed backfits required to address age-related
8	degradation shall be justified in accordance with 50.109(a)(3) and (c).
9	(3) In all instances of imposed backfits where alternatives exist for
10	satisfying a staff-imposed change, Section 50.109 (a)(7) shall apply:
11	(b) During the renewal term, the provisions of 50.109 shall apply in
12	their entirety to all backfits imposed by the staff;
13	§ 54.23 Contents of application - environmental information.
14	Each application must include an environmental report that complies with
15	the requirements of Subpart A of Part 51 of this chapter.
16	§ 54.25 Report of the Advisory Committee on Reactor Safeguards.
17	Each renewal application must be referred to the Advisory Committee on
18	Reactor Safeguards for a review and report. Any report must be made part of
19 20 21	the renewal term. If the requirement for adequate protection of the public health and safety are not met or the NRC determines that, to continue to meet equilatory requirements and licensee commitments in the renewal term,
20 21 22 23 24 25	additional aging management actions are necessary for those components dispositioned in § 54.21(a)(3), (4) or (5), that action should be so ordered by the NRC. The provision also allows applicants to choose among satisfactory aging management options based on cost or resources as is presently allowed.

- the record of the application and made available to the public, except to the 1
- 2 extent that security classification prevents disclosure.
- § 54.27 Hearings. 3

A notice of an opportunity for a hearing will be published in the 5 Federal Register, in accordance with § 2.105 of Part 2. In the absence of a 6 request therefor filed within 30 days by a person whose interest may be affected, the Commission may issue a renewed operating license without a 8 hearing, upon 30-day notice and publication once in the Federal Register of 9 its intent to do so. Any hearing on an application for a renewed operating license under this Part 54 shall be confined solely to the issues of whether 10 (i) the Commission may properly make, as to such license, the finding set 11 forth in Section 54.29 (b), and (ii) the requirements of Part 51 of this

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- 13 Chapter with respect to the renewal of a nuclear power plant operating license
- 14 have been met. No other issue shall be considered. 35
- 15 § 54.29 Generic Finding on Acceptability of Plants CLBs and Standards for
- Issuance of a Renewed License. 16

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³⁵ The second full paragraph on p. 46 of the Statement of Considerations points out a number of limitations on the scope of litigable issues in a license renewal proceeding. Basically, these issues are limited to agerelated degradation and those environmental issues related specifically to license renewal. Unfortunately, although these views are clearly expressed in the Statement of Considerations, they are not reflected in the rule itself. The rule should make clear that the scope of issues litigable at the hearing is limited to those issues which the NRC has determined are specifically germane to license renewal, so that the license renewal hearing does not become a means for revisiting the CLB itself.

Ţ.	a) Based of	the rule	making rec	ord, the Co	ommission her	eby finds and
determi	nes that (1)	CLBs for	operating	nuclear p	ower plants p	rovide an
acceptal	ble standard	and base	line to ev	aluate the	effects of a	ge-related
degrada	tion for the	renewal	term, and	(11) that,	CLBs with th	e exception of
age-rela	ated degrada	tion and	the finding	gs of § 50	.57(a), that	authorized
initial	and continu	ed operat	ions, cont	inue in ef	fect for lice	nse renewal
terms.						

(b) Based on (a) a renewed license may be issued by the Commission, up to the full term authorized by § 54.31, based upon a finding that actions have been identified and have been or will be taken with respect to significant age-related degradation of SSCs important to license renewal, such that the facility can be operated for the term of the renewed license without endangering the public health and safety, or the common defense and security. **

A renewed license may be issued by the Commission, up to the full term authorized by § 54.31, based upon a finding that actions have been identified and have been or will be taken with respect to age related degradation of those SSCs important to license renewal, such that there is reasonable assurance that the activities authorized by the renewed license can be conducted in accordance with the current licensing basis. Such a finding will

Junder this approach, plant CLBs, as amended to account for the effects of significant age-related degradation, would continue in effect under renewed licenses. Licensees would continue to be bound by all NRC regulatory requirements (proposed § 54.33(a) and 54.35), and plant CLBs would continue to be used, as necessary, to demonstrate compliance with those requirements. Thus, the license renewal process would be framed in the same consistent manner that governed reactor operations for the first 40 years.

1	constitute a finding that the facility can be operated for the term of the
2	renewed license without endangering the public health and safety or the common
3	defense and security and the findings under 10 CFR 50.57(a) need not be made
4	in order to issue a renewed license.

§ 54.31 Issuance of a renewed license.

- (a) A renewed license must be of the class for which the operating license currently in effect was issued.
- (b) A renewed license will be issued for a fixed period of time to be specified in the license, but in no case to exceed 40 years from the date of issuance. The term of a renewal license will be equal to the period of time remaining on the operating license currently in effect at the time of the approval of the application plus the additional period of time justified requested by the licensee (but no longer than an amount not to exceed 20 years). In no case shall this total exceed 40 years from the date of issuance.³⁷
- (c) The renewed license shall be issued after its application has been finally determined (including administrative and judicial appeals) and will

³⁷ Clarification of intent.

which should be removed. According to Section 54.31(c) does create an uncertainty which should be removed. According to Section 54.31, a renewed license becomes immediately effective upon its issuance and the initial operating license thereupon is "entirely ineffective and superseded." This language could be interpreted to have the unintended effect of leaving the facility without any effective license in the unlikely event that the renewed license for some reason was set aside on administrative or judicial appeal. Because the initial operating license would have become "entirely ineffective," it is not clear that the timely renewal doctrine in proposed Section 2.109(b) would apply to keep the initial license in effect. To avoid this interpretation, we recommend that proposed Section 54.31 be revised so that issuance of the renewed license not occur until completion of any administrative and judicial

1	become effective	immediately	upon its	issuance,	thereby ren	dering the
2	operating licens	e previously	in effect	entirely	ineffective	and superseded.

- 3 (d) A renewed license may be subsequently renewed upon expiration of 4 the renewal term, in accordance with all applicable requirements. The
- 5 application for such a subsequent renewal, if desired, may be submitted prior
- 6 to the expiration of the previous renewal term. 30

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- 7 § 54.33 Continuation of current licensing basis and Conditions of renewed
 8 license.
 - (a) Whether stated therein or not, the following are conditions of every renewed license issued under this part:
 - (1) Each renewed license will contain and otherwise be subject to the conditions set forth in §§ 50.54 and 50.55a(g) of this chapter.
 - (b) Each renewed license will be issued in such form and contain such conditions and limitations, including technical specifications, as the Commission deems appropriate and necessary to address age related degradation⁴⁰, including such provisions with respect to any uncompleted items

review proceedings. This would leave the initial operating license in effect, either because its original 40-year term had yet to expire or through operation of the timely renewal doctrine.

To accomplish this, proposed Section 54.31(c) has been reworded (using language borrowed from proposed Section 2.109(b).

This sentence has been clarified to allow a second application prior to the expiration of the first renewal.

The referenced phrase should be deleted since it creates the impression that the Commission intends to regulate the actions necessary to manage age-related degradation through technical specifications which is

- of plant modification and such limitations or conditions as the Commission believes are required to ensure assure⁴¹ that operation during the period of completion of such items will not endanger public health and safety. Other conditions and limitations, including technical specifications, in the current licensing—basis that do not address age-related degradation continue in effect for the renewed license.
- (c) Each renewed license will include those conditions to protect the environment that were imposed pursuant to § 50.36b and that are part of the current license in basis for the facility at the time of issuance of the renewed license. These conditions may be supplemented or amended as necessary to protect the environment during the term of the renewed license and will be derived from information contained in the supplement to the environmental report submitted pursuant to § 51.53(b) of this chapter, as analyzed and evaluated in the NRC record of decision. The conditions will identify the obligations of the licensee in the environmental area, including, as appropriate, requirements for reporting and recordkeeping of environmental data and any conditions and monitoring requirements for the protection of the nonaquatic environment.
- (d) The licensing basis for the renewed license shall include the current licensing basis, as defined in Section 54.3(a); the inclusion in the

inconsistent with current practice.

⁴¹ Consistent with terminology used in 50.57(b).

⁴² Since reference in both cases are to conditions of the license it is more appropriate that the license is referenced rather than the licensing basis.

- 1 licensing basis of matters such as licensee commitments does not Nothing in
- 2 this part shall change the legal status of the current licensing basis those
- 3 matters unless specifically so ordered pursuant to paragraphs (b) or (c) of
- 4 this section.43
- 5 § 54.34 Withdrawal.
- 6 The application for a renewal license may be withdrawn by the applicant
- 7 at any time and without cause, subject only to payment of required fees. Such
- 8 withdrawal will not affect any valid license held by the applicant at the time
- 9 of the withdrawal.44

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- 10 § 54.35 Requirements during term of renewed license.
- During the term of a renewed license, licensees shall continue to comply
- 12 with all Commission regulations contained in 10 CFR Parts 2, 19, 20, 21, 30,
- 13 40, 50, 51, 55, 72, 73, and 100 and appendices thereto which are applicable to
- 14 holders of operating licensees.
- 15 § 54.37 Additional records and recordkeeping requirements.
- The licensee shall retain in an auditable and retrievable form for the
- 17 term of the renewed operating license all information and documentation

⁴³ Proposed section 54.33(d) incorporation of the current licensing basis into licensing basis should be deleted because it has been replaced by NUMARC's revised section 54.29. Moreover, section 54.33(d) must be modified to avoid the possible interpretation that it and NRC's proposed section 54.29 intend the CLB to become either a condition or a part (like technical specifications) of the renewed licenses. Continuation of the present legal status of the current licensing basis must be specifically stated to avoid this confusion.

The rule should include an option to allow an applicant for license renewal to withdraw the application at any time during the proceeding.

- 1 required by, or otherwise necessary to document compliance with, the
- 2 provisions of this part.