

# NRC INSPECTION MANUAL

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## MANUAL CHAPTER 2516

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### POLICY AND GUIDANCE FOR THE LICENSE RENEWAL INSPECTION PROGRAM

#### 2516-01 PURPOSE

The purpose of **Inspection Manual Chapter (IMC) 2516** is to document policy and guidance for review and inspection activities associated with the **license renewal inspection program (LRIP)**. The LRIP is the process used by the **U.S. Nuclear Regulatory Commission (NRC)** staff to verify the **adequacy** of aging management programs (**AMPs**) and **other** activities associated with an applicant's request **to renew an operating license** of a commercial nuclear power plant beyond the initial licensing period under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 54, "**Requirements for the Renewal of Operating Licenses for Nuclear Power Plants.**"

#### 2516-02 POLICY AND OBJECTIVES

##### 02.01 Policy.

The basic policies, excerpted from the **statements of consideration for the 1995 revision to the 10 CFR Part 54 License Renewal Rule**, and objectives used in the development and implementation of the LRIP are:

- a. The NRC exists to assure that the public health and safety, the common defense and security, and the environment are protected.
- b. With respect to license renewal of a commercial nuclear power plant, the NRC has established the following two basic principles:
  1. The first principle of license renewal is that with the exception of age-related degradation and possibly a few other issues related to safety only during extended operation of nuclear power plants, the existing regulatory process is adequate to ensure that the licensing bases of all currently operating plants provide and maintain an acceptable level of safety so that operation will not be inimical to public health and safety or common defense and security.
  2. The second and equally important principle of license renewal holds that the plant-specific licensing basis must be maintained during the renewal term in the same manner and to the same extent as during the original licensing term. This would be accomplished, in part, through a program of age-related degradation management.
- c. An applicant for license renewal should rely on the plant's current licensing basis (CLB), actual plant-specific experience, industry-wide operating experience, as appropriate,

and existing engineering evaluations to determine those systems, structures, and components (SSCs) that are the initial focus of the license renewal review.

- d. The detrimental effects of aging affecting passive structures and components are less apparent than the detrimental effects of aging affecting structures and components that perform their intended functions with moving parts or a change in configuration or properties (active structures and components). Therefore, the aging management review of passive structures and components is needed to provide reasonable assurance that their intended functions are maintained consistent with the CLB during the period of extended operation.
- e. For the purpose of license renewal, an applicant can generically exclude, from its integrated plant assessment, the aging management review of the following: (1) active structures and components, and (2) structures and components that are replaced, based on qualified life or specified time period, when the replacement frequency is less than 40 years ("short-lived"). In addition, some components are both active and passive. Components that are passive, or both active and passive, must be included within the scope of components requiring an aging management review based on the intended function(s) that is performed without moving parts or change in configuration or properties.
- f. Postulated failures that could result from system interdependencies that are not part of the CLB and that have not been previously experienced need not be considered as part of a license renewal application (LRA). However, for some license renewal applicants, postulated failures that are part of the CLB may require consideration of more than the first level support systems.

## 02.02 Objectives.

The LRA safety review verifies the applicant: (1) identifies the appropriate SSCs that need to be managed for aging degradation, and (2) proposes additional actions needed to maintain the functionality of the SSCs in the period of extended operation. The CLB of a facility is modified to include programs and activities related to the aging management of SSCs through updates to the UFSAR and additional requirements added as part of the renewed operating license.

The objectives of the LRIP are to:

- a. Provide guidance for the inspection of license renewal programs, documentation, and other activities necessary for the staff to assess whether an applicant's LRA, AMPs, implementation activities, and on-site documentation provide reasonable assurance that the effects of aging will be adequately managed consistent with the CLB during the period of extended operation.
- b. Assess the implementation and/or completion of license conditions, commitments for license renewal, AMPs that manage the effects of aging and time-limited aging analyses (TLAAs) consistent with the licensee's CLB, after the renewed operating license is issued.
- c. Assess the implementation and/or completion of proposed license conditions, commitments for license renewal, AMPs and time-limited aging analyses (TLAAs) for applicants that meet the criteria in 10 CFR 2.109, "Effect of Timely Renewal

Application,” in which the applicant has submitted an LRA 5 years before the expiration date of the original operating license, the NRC’s final decision regarding the renewal of the operating license is still under review, and the applicant plans to operate beyond the expiration date of the original operating license.

## 2516-03 DEFINITIONS

### 03.01 Current Licensing Basis.

The **current licensing basis** is the set of NRC requirements applicable to a specific plant and a licensee's written regulatory commitments for ensuring compliance with and operation within applicable NRC requirements and the plant specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR Parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71; and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

### 03.02 Integrated Plant Assessment.

An integrated plant assessment (IPA) is a licensee assessment demonstrating a nuclear power plant facility's structures and components requiring aging management review in accordance with 10 CFR 54.21(a) for license renewal have been identified and that the effects of aging on the functionality of such structures and components will be managed to maintain the CLB such that there is an acceptable level of safety during the period of extended operation.

### 03.03 Mandated Licensing Basis Documents.

Mandated licensing basis documents are documents, such as the updated final safety analysis report (UFSAR), the quality assurance program, the security plan, and the emergency plan, for which the NRC has established requirements for content, change control and reporting. The information that should be included in these documents is specified in applicable regulations and regulatory guides. The change control mechanisms and reporting requirements are defined by regulations such as 10 CFR 50.59, 50.54, and 50.71.

### 03.04 Nuclear Power Plant.

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

### 03.05 Obligation.

Obligations are conditions or actions that are legally binding requirements imposed on licensees through applicable rules, regulations, orders, and licenses (including technical specifications and license conditions). The imposition of obligations (sometimes referred to as regulatory

requirements) during routine interactions with licensees should be reserved for matters that satisfy the criteria of 10 CFR 50.36 or are otherwise found to be of high safety or regulatory significance. The major distinction between obligations and other parts of the licensing bases is that changes generally cannot be made without prior NRC approval.

#### 03.06 Period of Extended Operation.

The period of extended operation is the 20-year period commencing immediately after the expiration of an applicant's initial 40-year operating license. For plants that are approved for a renewed operating license, a subsequent period of extended operation (20-year period) may commence immediately after the expiration of the renewed 20-year operating license.

#### 03.07 Regulatory Commitment.

A regulatory commitment is an explicit statement to take a specific action agreed to, or volunteered by, a licensee and submitted in writing on the docket to the NRC. A regulatory commitment is appropriate for matters in which the staff has a significant interest but which do not warrant either a legally binding requirement or inclusion in the UFSAR or a program subject to a formal regulatory change control mechanism. Control of such commitments in accordance with licensee programs is acceptable provided those programs include controls for evaluating changes and, when appropriate, reporting them to the NRC.

### 2516-04 ROLES AND RESPONSIBILITIES

#### 04.01 The Commission.

The Commission delegated its authority for approving and issuing a renewed operating license to the Director of the Office of Nuclear Reactor Regulation (NRR) for only those applications that are not contested. The Director of NRR may not approve a renewed operating license if the Commission reserves the right to review the application.

#### 04.02 Regional Offices.

The Regional Administrators (RAs) are responsible for the following:

- a. Managing and supervising the implementation of license renewal inspection programs and activities at their respective **Regions**.
- b. Making recommendations for the approval **or** disapproval of a request for a renewed license by an applicant from their **Region**, on the basis of the inspection results.

The Regional Division Director or designee is responsible for the approval of license renewal inspection plans within its **Region**.

#### 04.03 Division of License Renewal.

The Division of License Renewal (DLR), NRR is responsible for the following:

- a. Overall development and implementation of staff programs and activities associated with 10 CFR Part 54.
- b. Coordination of safety and environmental LRA reviews.
- c. Coordination of the staff's final recommendation for the approval or disapproval of a renewed operating license.
- d. Ensuring adequate training is developed and made available to NRR staff and Regions.
- e. Development and control of the license renewal Standard Review Plan (SRP-LR), the Generic Aging Lessons Learned (GALL) Report, interim staff guidance, regulatory guides and generic communications related to license renewal, and LRIP procedures.
- f. Technical and inspection support for the review and inspection of license renewal applicant's programs and activities.
- g. Development of an adequate training program for NRC license renewal activities.

### 2516-05 GENERAL POLICIES

#### 05.01 Authority.

NRR is assigned the responsibility to establish the foundation on which the reactor inspection program is structured, and to confer on the Regions the authority to inspect activities over which the NRC has jurisdiction. DLR will be responsible for the development and oversight of the LRIP, while the Regions will be responsible for the implementation of the LRIP. Any follow-up and future inspection needs relating to license renewal after the renewed operating license is granted will be integrated into the Reactor Oversight Program under IMC 2515. The responsibility for these inspections will be maintained by the Regions.

#### 05.02 Applicant Responsibility.

It is emphasized that it is the applicant's responsibility to maintain and operate the facility safely and in compliance with the CLB and regulatory requirements. NRC inspections are not designed to duplicate or substitute for an applicant's management controls established as a part of its quality verification system.

#### 05.03 Communications.

In implementing the inspection program set forth by this IMC, frequent communication between DLR, the Regions and other offices within the NRC is encouraged. An inspection plan will be developed early in the inspection process by the inspection team leader for each applicant with assistance from DLR, if needed. The inspection plans are subject to the approval of the

responsible Regional Division Director or designee and will be developed for Inspection Procedure (IP) 71002, "License Renewal Inspection," IP 71003, "Post-Approval Site Inspections for License Renewal" and IP 71013, "Site Inspections at Plants with a Timely Renewal Application." The Regions will implement the inspection plan with assistance from DLR and other supporting organizations, if needed.

## 2516-06 LICENSE RENEWAL INSPECTIONS

### 06.01 Purpose.

The fundamental purpose of license renewal inspections is to ensure that there is reasonable assurance that the effects of aging will be managed consistent with the CLB during the period of extended operation.

### 06.02 Policy.

It is not possible to anticipate all the unique circumstances that might be encountered during the course of a particular inspection. Therefore, individual inspectors are expected to exercise initiative in conducting inspections based on their expertise and experience to ensure that all the inspection objectives are met.

If in the course of conducting an inspection, current potential safety concerns or compliance issues outside the scope of the procedure are identified, the concerns should be: (1) pursued to the extent necessary to understand the issue, and (2) communicated to the resident inspectors on-site as well as the appropriate Regional staff for further follow-up inspections. The license renewal inspection team should contact the license renewal program office if assistance is needed.

### 06.03 Objectives.

The license renewal inspection objectives are to:

- a. Provide a basis for recommending issuance or denial of a renewed operating license.
- b. Identify weaknesses within an applicant's overall license renewal program or an individual AMP that fail to provide reasonable assurance that the applicable aging effects will be adequately managed during the period of extended operation.
- c. Determine the status of compliance with 10 CFR Part 54 and other areas relating to maintaining and operating the plant such that the continued operation beyond the current licensing term will not be inimical to the public health and safety.

### 06.04 Audits.

The LRA review consists of an in-office acceptance review, an on-site scoping and screening audit, an on-site AMP audit and an in-office audit of TLAAs. The LRA is primarily reviewed by NRR to verify that the content of the application meets the technical and regulatory requirements of the license renewal rule. The audit gathers information for the purpose of making conclusions relative to future inspections or regulatory decisions.

#### 06.05 License Renewal Application Site-Inspection.

The site inspections are assessments of an applicant's implementation of and compliance with 10 CFR Part 54 requirements. The LRA site inspection activities will be performed using IP 71002. The Regions are responsible for the team inspection. NRR supporting staff may also be detailed to the Regions for the period of time necessary to prepare, inspect, and document inspection activities. The site inspections will be performed by a team inspection in the areas of the scoping and screening activities, observation of the condition of plant equipment, and implementation of AMPs and review of associated documentation. During walkdowns, inspectors may identify the effects of aging not previously recognized. Such observations allow the inspectors to evaluate the success of previously implemented plant programs which are being credited for license renewal AMPs. The Regional staff and inspection team members will become familiar with the LRA in preparation for inspections to provide operational and performance input in the application review, to assess the applicant's commitments against past performance and experience, and in preparation to provide a Regional recommendation to grant or deny approval for the applicant's request for a renewed operating license. The IP 71002 inspection occurs after the audit and verifies the implementation of (or readiness to implement) license renewal activities.

#### 06.06 Post-Approval Site Inspections.

Post-approval site inspections for license renewal will be conducted in accordance with IP 71003. The post-approval site inspections will be performed by a team to verify the license conditions added as part of the renewed operating license, regulatory commitments, selected AMPs, and TLAAAs are adequately implemented and/or completed. The inspection also verifies the UFSAR includes any "newly identified" SSCs that should have been within the scope of the license renewal program and subject to an aging management review or TLAA evaluation, pursuant to 10 CFR 54.37(b); and the description of the AMPs and related activities are, or will be, contained in the UFSAR and that the description of the programs is consistent with the programs implemented by the licensee. The inspection team will verify the licensee submitted a license amendment request to the NRC staff in accordance with 10 CFR 50.90 for changes to a license condition for license renewal, managed changes to the UFSAR supplement in accordance with 10 CFR 50.59, and managed changes to regulatory commitments associated with license renewal in accordance with Nuclear Energy Institute (NEI) 99-04, "Guidelines for Managing NRC Commitment Changes," as endorsed by Regulatory Issue Summary (RIS) 2000-017. The Regions are responsible for the team inspection. NRR supporting staff may also be detailed to the Region for the period of time necessary to prepare, inspect, and document inspection activities. The Regional staff and inspection team members will review the safety evaluation report (SER) for license renewal of the plant, the UFSAR supplement as revised during the LRA review, and other documents per IP 71003 to assess the implementation of the license renewal program and verify the licensee's readiness to enter the period of extended operation.

#### 06.07 Inspection Documentation.

Inspections will be documented in inspection reports sent to the applicant and made publicly available in the Agencywide Documents Access and Management System (ADAMS). The results of the IP 71002 team inspections will provide input for the staff and Regional recommendations to grant or deny an applicant's request for a renewed operating license. The



results of the IP 71003 team inspections will provide an assessment of the licensee's renewal program readiness upon entering the period of extended operation.

## 2516-07 INSPECTIONS AT PLANTS WITH A TIMELY RENEWAL APPLICATION

### 07.01 Purpose.

At the conclusion of the safety and environmental reviews, a final determination on renewal of the operating license may be delayed because hearings on admitted contentions for a plant are in progress. A delay may also be due to the Commission's decision in 2012 to cease all licensing activities that rely on the Waste Confidence Decision and Rule. However, a plant that submitted an LRA for NRC review is approaching the expiration date of the current operating license. The regulation 10 CFR 2.109(b) states:

If the licensee of a nuclear power plant licensed under 10 CFR 50.21(b) or 50.22 files a sufficient application for renewal of either an operating license or a combined license at least 5 years before the expiration of the existing license, the existing license will not be deemed to have expired until the application has been finally determined.

In accordance with the regulation above, if the applicant submits the LRA 5 years before the expiration of the original operating license, the licensee is authorized to continue to operate under its existing operating license, which is deemed not to have expired until the NRC has determined the application for renewal. License renewal inspections will be performed at plants with timely renewal applications to assess the applicant's readiness to operate beyond the expiration date of the original operating license through the timely verification that the applicant has made sufficient progress in implementing its AMPs, TLAAs, commitments, and proposed license conditions. The inspection will be performed after the license renewal SER has been issued but prior to the expiration date of the original operating license for applicants meeting the criteria of 10 CFR 2.109(b), in which the NRC's final decision regarding the renewal of the operating license is still in review and the applicant is likely to operate past the expiration date of the original operating license for one or more of its units under its current license. The inspection team will be led by the Regions with DLR staff providing support as needed. IP 71013, "Site Inspections at Plants with a Timely Renewal Application," was developed for the inspection of license renewal programs for applicants with timely renewal applications. In the case where the plant is approaching timely renewal, IP 71003, "Post-Approval Site Inspection for License Renewal," would not be applicable. The Regions should perform IP 71003 at those plants with renewed operating licenses. The intent is to perform either IP 71003 or IP 71013, but not both.

### 07.02 Policy.

Before commencing with the timely renewal inspection, the staff may choose to initiate communications with, and/or obtain documentation from the applicant to gain an understanding of the status of the license renewal activities in proposed license conditions, regulatory commitments, AMPs, TLAAs and the UFSAR as revised during the LRA review. The staff may also issue: a license condition pending the outcome of an adequate protection review of the commitments, AMPs, and TLAAs for license renewal; a confirmatory action letter; a demand for information; or an order. The staff may also choose to invoke paragraph (f) of 10 CFR 50.54 to



request information that will verify the applicant's readiness to operate past the expiration date of the original operating license.

#### 07.03 Objectives.

The objectives of license renewal inspections at plants approaching timely renewal are:

- To verify the proposed license conditions from the staff's license renewal SER, commitments for license renewal, selected AMPs and TLAAs are implemented in accordance with 10 CFR Part 54.
- To verify the LRA is updated annually in accordance with the requirement to submit changes to the CLB during the NRC staff review of the LRA as required by 10 CFR 54.21(b).
- To verify the "newly identified" SSCs are or will be included in the annual UFSAR updates as required by 10 CFR 54.37(b).
- To verify the description of AMPs and related activities that will be contained in the UFSAR is consistent with the programs implemented by the applicant.
- To verify the changes to regulatory commitments from the SER for license renewal are implemented in accordance with NEI 99-04, "Guidelines for Managing NRC Commitment Changes," as endorsed by Regulatory Issue Summary (RIS) 2000-017.

#### 07.04 Inspection Documentation.

The results of timely renewal inspections will be documented in a publicly available and independent inspection report. Issues of concern associated with the implementation and/or completion of proposed license conditions, regulatory commitments, TLAAs and AMPs will be evaluated and may be used to determine the final license renewal decision, and whether additional inspection follow-up is needed.

END

Attachments:

1. Revision History for IMC 2516

Attachment 1 – Revision History for IMC 2516

| Commitment Tracking Number | Accession Number<br>Issue Date<br>Change Notice | Description of Change   | Description of Training Required and Completion Date | Comment and Feedback Resolution Accession Number |
|----------------------------|---|---|--|--|
| N/A                        | 06/22/98<br>CN 98-009                           | IMC 2516 is issued to provide guidance to NRC staff, Regions, and consultant personnel for review and inspection activities associated with an applicant's request for a renewed license for a commercial nuclear power plant beyond the initial licensing period under Title 10 of the Code of Federal Regulation, (10CFR) Part 54.  | N/A  | N/A  |
| N/A                        | 02/03/99<br>CN 99-002                           | IMC 2516 has been revised to update the license renewal inspection process on the basis of lessons learned during the development of the first two inspection plans. The major changes included removal of inspection activities associated with TLAAs and removal of inspection activities associated with the requirements under 10 CFR 54.19, "Content of Application - General Information." These revisions involve engineering evaluations performed during the safety evaluation performed by NRR. | N/A  | N/A  |
| N/A                        | 01/08/01<br>CN 01-001                           | IMC 2516 has been updated for clarity   | N/A  | N/A  |
| N/A                        | ML021150859<br>04/10/02<br>CN 02-016            | IMC 2516 has been revised to: (1) change approval authority from the Director, Division of Inspection Program Management (DIPM), to the Branch Chief, Inspection Program Branch (IIPB), (2) update the reference material to reflect current standards, and (3) change Attachment 3 to reflect the approval authority as stated in item No. 1 above.  | N/A  | N/A  |

| Commitment Tracking Number | Accession Number<br>Issue Date<br>Change Notice | Description of Change   | Description of Training Required and Completion Date | Comment and Feedback Resolution Accession Number |
|----------------------------|---|---|--|--|
| N/A                        | ML050660153<br>02/18/05<br>CN 05-006            | IMC 2516 has been revised to remove IIPB as approval authority for license renewal inspection plans, remove reference to the Associate Director for Inspection and Programs, update the general policies and program objectives, and provide an updated sample inspection letter. | N/A  | N/A  |
|                            | ML13092A015<br>08/13/13<br>CN 13-017            | IMC 2516 has been revised to update the divisions and branches, include additional definitions, include guidance on timely renewal applications and remove the Region Notification of Plant Readiness for License Renewal and the Sample License Renewal Inspection Letter        |  |  |