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## MANUAL CHAPTER 2516

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

#### 2516-01 PURPOSE

The purpose of MC 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 Nuclear Regulatory Commission (NRC) staff, region, and consultants to verify the programs and 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, (10 CFR) Part 54.

#### 2516-02 POLICY AND OBJECTIVES

02.01 The basic policies and objectives used in the development and implementation of the LRIP are as follows:

- 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 the period of extended operation 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 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 its 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.
- g. All systems, structures, and components (including active/short-lived structures and components) and plant-specific exemptions that are evaluated based on time-limited aging analyses are subject to a license renewal evaluation.

02.02 The objectives of the LRIP are as follows:

- a. The LRIP will provide the guidance for the inspection of license renewal programs, documentation, and activities necessary for the staff to make a finding that an applicant's LRA, aging management programs (AMPs), demonstrations, implementation activities, and on-site documentation provide reasonable assurance that the effects of aging will be effectively managed consistent with the CLB during the period of extended operation.
- b. The LRIP will also provide the guidance for assessing the adequacy of implemented AMPs to effectively manage the effects of aging, consistent with the licensee's CLB, after the renewed license is issued.

## 2516-03 DEFINITIONS

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.

Regulatory Commitment is an explicit statement made by a licensee (or applicant) to take a specific action agreed to or volunteered by a licensee, and that has been submitted in writing on the docket to the Commission.

Integrated Plant Assessment (IPA) is a licensee assessment that demonstrates that a nuclear power plant facility's structures and components requiring aging management review in accordance with §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.

Demonstration, as intended under 10 CFR 54.21(a)(ii)(3), is a collection of supporting information and/or objective evidence that provides reasonable assurance that an AMP will manage the effects of aging under CLB design conditions during the period of extended operation. For an existing AMP, it is a summary (documented within a LRA) of the observations relating to the implementation of each program under review that provides reasonable assurance that the AMP will effectively manage the effects of aging under CLB design conditions during the period of extended operation. This summary of observations need to reflect all the different kinds of results experienced as a result of implementing an AMP.

A new AMP, is a summary (documented within a LRA) of a schedule, a description of the methodology, applicable acceptance criteria, and corrective actions for providing supporting information and/or objective evidence that the AMP will effectively manage the effects of aging under CLB design conditions during the period of extended operation.

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

Time-limited aging analyses (TLAAs), for the purposes of license renewal, as defined under 10 CFR 54.3, are those licensee calculations and analyses that:

- (1) Involve systems, structures, and components within the scope of license renewal, as delineated in §54.4(a);
- (2) Consider the effects of aging;
- (3) Involve time-limited assumptions defined by the current operating term, for example, 40 years;
- (4) Were determined to be relevant by the licensee in making a safety determination;
- (5) Involve conclusions or provide the basis for conclusions related to the capability of the system, structure, and component to perform its intended functions, as delineated in §54.4(b); and
- (6) Are contained or incorporated by reference in the CLB.

All other terms in this part have the same meanings as set out in 10 CFR 50.2 or Section 11 of the Atomic Energy Act, as applicable.

## 2516-04 RESPONSIBILITIES AND AUTHORITIES

04.01 Director of Nuclear Reactor Regulation (NRR) is responsible for approving and issuing the renewed license for a period beyond the current licensing term.

04.02 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/disapproval of a request for a renewed license by an applicant from their region, on the bases of the inspection results.

04.03 Associate Director for Inspection and Programs (ADIP), NRR is responsible for the following:

- a. Providing technical support to review the technical information and develop the safety evaluations for LRAs.
- b. Providing technical support for the LRIP as requested by the regions.

04.04 Director of Division of Inspection Program Management (DIPM), NRR is responsible for the approval of all license renewal inspection plans.

04.05 The Responsible Regional Division Director is responsible for the approval of license renewal inspection plans within its region.

04.06 Division of Regulatory Improvement Programs (DRIP), 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 the staff's final recommendation for the approval/disapproval of a request for a renewed license.
- c. Ensuring adequate training is developed and made available to NRR staff and regions.

04.07 License Renewal and Standardization Branch (RSLB), NRR is responsible for the following:

- a. Development and control of the license renewal Standard Review Plan (SRP-LR), Regulatory Guides, and LRIP.
- b. Coordination of LRA reviews.
- c. Technical and inspection support for the review and inspection of license renewal applicants' programs and activities.
- d. 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. For the purpose of license renewal, NRR/DRIP, 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 license is granted will be integrated into the Reactor Inspection Program under Manual Chapter (MC) 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 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 Development and Implementation of Inspection Requirements. The elements used in developing the specific inspection requirements and activities (and associated training activities) include 10 CFR Part 54, the statement of consideration that accompanied the promulgation of the rule (60 FR 22461 published May 8, 1995), the SRP-LR, the draft regulatory guide entitled "Standard Format and Content for Applications to Renew nuclear Power Plant Operating Licenses"

(DG-11047), approved industry codes and standards, and staff and industry experience (i.e., nuclear industry operating experience, NRC inspection findings and the technical judgment of engineers and scientists).

05.04 Changes to the Current Licensing Basis. During the license renewal review and inspection period, the applicant shall submit amendments to the renewal application that identify any changes to the CLB of the facility, which materially affect the contents of the license renewal application, including the FSAR supplement. The amendment will be reviewed by NRR for acceptability and the changes may require inspection as part of the LRIP.

05.05 Communications. In implementing the inspection program set forth by this manual chapter, frequent communications between RLSB, the regions and other offices within the NRC are encouraged. An inspection plan, based on the requirements of IP 71002 and subject to the approval of the Directors of DIPM and the responsible Regional Division Director, will be developed early in the inspection process by the inspection team leader for each applicant with assistance from RLSB. The region will implement this plan with assistance from RLSB and other supporting organizations.

The inspection teams are also required to provide information and/or feedback regarding specific license renewal activities and lessons learned.

Matters pertaining to suspected material false statements identified during the course of an inspection of licensee programs and activities must be promptly communicated to the Office of Investigations (OI) and RLSB. Applicants should not be advised that a suspected material false statement is being referred to OI before referral.

## 2516-06 PROGRAM OBJECTIVES

06.01 General. The fundamental task of the LRIP 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. The program objectives derived from that task are as follows:

- a. To provide a basis for recommending issuance or denial of a renewed license.
- b. To identify weaknesses within an applicant's overall license renewal program or an individual AMP that fails to provide reasonable assurance that the applicable aging effects will be adequately implemented during the period of extended operation.
- c. To 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.

06.02 Independent Inspection Policy. These inspections should be conducted in accordance with inspection procedure IP 71002. However, it is not possible to anticipate all the unique circumstances that might be encountered during the course of a particular inspection and, therefore, individual inspectors are expected to exercise initiative in conducting inspections based on their expertise and experience, as needed, to assure that all the inspection objectives are met.

There is no numeric goal or minimum requirement for independent inspection by any inspector. Independent inspection effort is to be charged to IP 71002. If in the course of conducting an inspection, potential safety concerns outside the scope of the procedure being executed are identified, the concerns should be pursued to the extent necessary to characterize the issues to

the inspector's supervisor so that a determination can be made as to the need for and timing of further follow-up inspection.

## 2516-07 NATURE OF THE PROGRAM

07.01 General. The LRIP procedures and activities were developed based on the requirements promulgated under 10 CFR Part 54 and staff inspection experience. They will be revised based on staff experience and lessons learned from the implementation of the inspection process, on analysis and evaluation of operational data and events, and on ongoing evaluation of their adequacy and effectiveness. They will be kept up to date to reflect the increased staff experience with inspections relating to license renewal, long-term aging issues, and new AMPs.

## 2516-08 STRUCTURE OF A PROGRAM

08.01 General. The license renewal inspection program consists of a LRA review and site inspections. LRA review is basically performed in headquarters. The site-inspections are performed in accordance with IP 71002, at the site by a team of inspectors and technical experts from the regions, headquarters, and consultant organizations. Site inspections conducted after the renewed license has been approved and issued will be conducted in accordance with IMC 2515.

08.02 LRA Review. The LRA review is primarily a headquarters review performed by NRR technical branches to ensure that the applicant meets the technical and regulatory requirements of the rule, and to verify that the format and content of the application meet the requirements of the rule. The regional staff and inspection team members will become familiar with the LRA to provide operational and performance input in the application review, to assess the applicant's positions and commitments against their performance and experience in preparation for inspection activities, and in preparation to provide a regional recommendation to grant or deny approval for the applicant's request for a renewed license.

08.03 Site-Inspections. The site inspections are assessments of an applicant's implementation of and compliance with 10 CFR Part 54 requirements. The inspection team will be comprised of technical, program, and operational experts from regional staff, headquarters staff, and consultants. All inspection teams will be led by the regions and any supporting staff will be detailed to the region for the period of time necessary to prepare, inspect, and document inspection activities, as applicable. The site inspections will be performed by a series of team inspections over an extended period of time (one to three years) in the areas of the scoping activities, determination of aging effects, selection of AMPs, and implementation of those programs and associated documentation. The intent of the inspection is to support a finding as to the reasonable assurance of an applicant's license renewal program and activities to manage the effects of aging consistent with the CLB during the period of extended operation. The site-inspection activities will be governed by IP 71002 "License Renewal Inspections." Attachments to IMC 2516 provide guidance on the preparation of documents related to the site inspection. Attachment 1, "Regional Notification of Plant Readiness For License Renewal," provides a region with guidance on how to prepare its overall evaluation of inspection activities performed on an applicant for license renewal. Attachment 2, "Sample License Renewal Inspection Letters," is a sample letter of an overall evaluation. Attachment 3, "Sample Inspection Plan Approval Memorandum," is a sample memorandum for the Director of Inspection Program Management, NRR and the responsible Regional Division director to approve a site-specific license renewal inspection plan prepared jointly by the inspection team leader and RLSB. The results of site team inspections will provide major input for the staff and regional recommendations to grant or deny an applicant's request for a renewed license.

08.04 Other Site-Inspections. Site inspections conducted after the approval of the renewed license will be conducted in accordance with IMC 2515. These inspections will verify the licensee's continued compliance with 10 CFR Part 50 and commitments related to the LRA.

2516-09 SCOPE OF THE PROGRAM

09.01 Consistency. The program will be structured and defined in a manner to advance consistency of implementation within and among headquarters and regional offices. Definitive guidance and acceptance criteria will be provided, when necessary, to supplement and explain regulatory requirements and safety standards. New and revised programs will be explained and discussed with the inspection staff, and the ongoing function of program appraisal will search for ways to improve consistency in implementation through better expression of policies, procedures and guidance. Finally, the program will be expressed in clear terms using plain writing standards.

09.02 Independence. Inspections will focus on the program and activities developed by the applicant. Performance based inspections, which include independent observations and evaluation by the inspector, will be emphasized. Independent observations of ongoing activities and plant installations, and confirmatory measurements, as appropriate and reasonable, will be emphasized over other inspection techniques such as personal discussions and record and document review.

END

Attachments:

1. Region Notification of Plant Readiness for License Renewal
2. Sample License Renewal Inspection Letters
3. Sample Inspection Plan Approval Letter

## Attachment 1

### REGION NOTIFICATION OF PLANT READINESS FOR LICENSE RENEWAL

#### OBJECTIVES

1. Provide a status of the license renewal inspection program and findings.
2. Provide a summary status of the applicant's license renewal program compliance with 10 CFR Part 54.
3. Provide a summary status of other operational readiness concerns relating to relicensing of the facility for an extended period of operation.
4. Provide a status of open items and their significance (specific milestones).

#### NOTIFICATION

Approximately 30 days before the scheduled issuance of a renewed license, the regional office will provide an overall evaluation of inspection activities to assess the applicant's readiness for relicensing for an extended period of operation. The evaluation will be transmitted by memorandum to the Office Director, Office of Nuclear Reactor Regulation (NRR). It will include the region's evaluation as to whether or not the applicant has documented, implemented and demonstrated license renewal programs and activities consistent with the rule such that there is reasonable assurance that the effects of aging will be managed consistent with the current licensing basis (CLB) throughout the period of extended operation. This evaluation will be based on sample inspections of the applicant's scoping, screening, and aging management programs and activities relating to license renewal to verify, with reasonable assurance, that these programs and activities have been implemented effectively and the associated procedures and records have been documented consistent with the rule, and site approved programs and procedures.

The status report will address the following areas, as appropriate:

- a. Inspection Program. Review the status of inspections required by IMC 2516 as described in the applicable inspection plan approved by the Director of DIPM, NRR, and responsible Regional Division Director, and identify all outstanding inspection items and the reason(s) for their incompleteness.
- b. Enforcement Items. Review the status of enforcement items related to license renewal.
- c. Other Items. Identify any other items relative to the applicant's readiness to operate for the period of extended operation requested by the applicant.

#### NOTIFICATION GUIDANCE

##### General Guidance

Standards for issuance of a renewed license are defined in 10 CFR 54.29. Any items that could affect the issuance of a renewed license must be identified to NRR directly.

### Specific Guidance

The status report, issued approximately 30 days before the scheduled issuance of a renewed license, may be fairly general in topic identification. It is intended to present the general status of scoping and screening activities, license renewal program implementation, aging management program demonstration, and documentation inspection. It is an overall assessment of an applicant's implementation and documentation of its integrated plant assessment. The memorandum will also provide a list of open inspection items requiring follow-up, and any special problem areas. The memorandum will also include the region's overall recommendation on the applicant's request for relicensing.

END

ATTACHMENT 2

SAMPLE LICENSE RENEWAL INSPECTION LETTERS

MEMORANDUM TO: Director  
Office of Nuclear Reactor Regulations

FROM: Regional Administrator  
Region I

SUBJECT: CALVERT CLIFFS UNITS 1 & 2, LICENSE RENEWAL APPLICATION

Based on the results of our inspection efforts, we have determined that Baltimore Gas & Electric Company programs, implementation, and other activities related to the license renewal application for Calvert Cliffs Units 1&2 have been completed in substantial agreement with docketed commitments and regulatory requirements, with the exception of items indicated in the enclosure.

We have completed our inspections per the guidance of MC 2516 and Inspection Procedure (IP) 71002. To verify the programs and activities relating to 10 CFR Part 54 and the Calvert Cliffs Nuclear Power Plant license renewal application, the inspections verified scoping and screening determinations, implementation of aging management programs, compliance with regulatory requirements, and the documentation related to the license renewal programs. Further, the inspections reviewed the draft safety evaluation reports to confirm the accuracy of the field implementation aspects as used in the bases for the evaluations' positions. The items identified in the enclosure represent issues needing regulatory followup and have been categorized by recommended completion milestones.

We recommend that the license renewal application be approved, as conditioned by the items in the attached enclosure.

Hubert J. Miller  
Regional Administrator  
Region I

Docket No. 50-317; 50-318

Enclosure: License Renewal Issues

cc w/encl:

ATTACHMENT 3

INSPECTION PLAN APPROVAL MEMORANDUM

MEMORANDUM TO: Christopher I. Grimes, Chief  
License Renewal and Standardization Branch  
Office of Nuclear Reactor Regulation

Caudle Julian, Inspection Team Leader  
Division of Reactor Safety  
Region II

FROM: Bruce Boger, Director  
Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

Charles Casto, Director  
Division of Reactor Safety  
Region II

SUBJECT: PLANT HATCH LICENSE RENEWAL INSPECTIONS

Attached is the final version of the Plant Hatch License Renewal Inspection Plan. The plan, which was developed jointly by NRR and Region II, is hereby approved. You are directed to use this plan to prepare and conduct the license renewal inspections at Plant Hatch.

Date: \_\_\_\_\_

\_\_\_\_\_  
Bruce Boger, Director  
Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

Date: \_\_\_\_\_

\_\_\_\_\_  
Charles Casto, Director  
Division of Reactor Safety  
Region II

Attachment: Plant Hatch License Renewal Inspection Plan