

# U.S. NUCLEAR REGULATORY COMMISSION

## DRAFT REGULATORY GUIDE DG-1321



*Proposed new Regulatory Guide 1.237*

Issue Date: April 2020  
Technical Lead: Marieliz Johnson

## GUIDANCE FOR CHANGES DURING CONSTRUCTION FOR NEW NUCLEAR POWER PLANTS LICENSED UNDER 10 CFR PART 52

### A. INTRODUCTION

#### Purpose

This regulatory guide (RG) describes a process that the staff of the U.S. Nuclear Regulatory Commission (NRC) considers acceptable for implementation of changes to the design of structures, systems, and components (SSCs) of a facility being constructed under a combined license (COL) covered by Title 10 of the *Code of Federal Regulations* (CFR), Part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants” (Ref. 1), Sections 52.98(b) and (c), “Finality of Combined Licenses; Information Requests.” Section 52.98(b) covers COLs that do not reference a certified standard design or a manufacturing license, but does cover a COL that references a standard design approval (SDA), and section 52.98(c) covers COLs that reference a certified standard design. Specifically, this RG addresses the timing of a proposed change to the design of facility SSCs during construction, as the facility design is described in the final safety analysis report (FSAR), as updated, and for which a license amendment is required by an applicable change process of 10 CFR Parts 50 or 52.

#### Applicability

This RG applies to holders of COLs issued under 10 CFR Part 52. While this RG focuses on COLs that do not reference a manufacturing license, this RG may be applicable to a COL that references a manufacturing license, but those applications would be reviewed on a case-by-case basis.

#### Applicable Regulations

- 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities” (Ref. 2) discusses the change processes applicable to information in an FSAR, as updated, for a COL for changes that are not controlled by a design certification rule (i.e., an appendix to 10 CFR Part 52).

---

This RG is being issued in draft form to involve the public in the development of regulatory guidance in this area. It has not received final staff review or approval and does not represent an NRC final staff position. Public comments are being solicited on this DG and its associated regulatory analysis. Comments should be accompanied by appropriate supporting data. Comments may be submitted through the Federal rulemaking Web site, <http://www.regulations.gov>, by searching for draft regulatory guide DG-1321. Alternatively, comments may be submitted to the Office of Administration, Mailstop: TWFN 7A-06M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Staff. Comments must be submitted by the date indicated in the *Federal Register* notice.

Electronic copies of this DG, previous versions of DGs, and other recently issued guides are available through the NRC’s public Web site under the Regulatory Guides document collection of the NRC Library at <https://nrcweb.nrc.gov/reading-rm/doc-collections/reg-guides/>. The DG is also available through the NRC’s Agencywide Documents Access and Management System (ADAMS) at <http://www.nrc.gov/reading-rm/adams.html>, under Accession No. ML19340B290. The regulatory analysis may be found in ADAMS under Accession No. ML20010G336.

---

- 10 CFR 50.59, “Changes, tests and, experiments,” governs changes to the facility as described in the FSAR, as updated, for a COL issued under 10 CFR Part 52 for changes that are outside the scope of a design certification rule.
- 10 CFR 50.90, “Application for amendment of license, construction permit, or early site permit,” requires that a COL holder under 10 CFR Part 52 who desires to amend the license must file an application for a license amendment with the Commission fully describing the changes desired and following, as far as applicable, the form prescribed for original applications.
- 10 CFR 52.98, governs changes to and departures from the design of a facility, as described in the FSAR, as updated, for a facility licensed under 10 CFR Part 52.
  - 10 CFR 52.98(b), in part, states that changes to a facility licensed under 10 CFR Part 52, as described in the FSAR, as updated, that does not reference a certified design, are governed by the applicable change processes in 10 CFR Part 50.
  - 10 CFR 52.98(c)(1) states that, for a COL for a facility that references a certified design, changes to and departures from information within the scope of a certified design are governed by the requirements of the applicable design certification rule.
  - 10 CFR 52.98(c)(2) states that, for a COL for a facility that references a certified design, changes that are outside the scope of the design certification are governed by the applicable change processes in 10 CFR Part 50 unless they also involve changes to or noncompliance with information within the scope of the referenced design certification rule, in which case the changes are governed by 10 CFR 52.98(c)(1).
- 10 CFR Part 52, Appendices A, B, C, D, E, and F, certify standard designs
  - Section II.E of each appendix defines Tier 2 of the generic design certification document (DCD) for the certified design, states that compliance with Tier 2 is required, and states that Section VIII governs generic changes to and plant-specific departures from Tier 2.
  - Section III.B of each appendix requires that each licensee referencing the appendix comply with the requirements of Tier 1 and Tier 2, except as otherwise provided in the appendix.
  - Section VIII of each appendix includes requirements for changes to and departures from the information in the generic design certification document (DCD) for the certified design, or for a facility for which a COL has been issued, the plant-specific DCD portion of the FSAR, as updated, for that facility.
- 10 CFR 52.99, “Inspection during construction; ITAAC schedules and notifications; NRC notices,” requires, in part, that a combined license holder notify the NRC that prescribed inspections, tests, and analyses have been completed and the prescribed acceptance criteria are met. A change to a facility during construction pursuant to a COL may affect a licensee’s reporting obligations.

## **Related Guidance**

- RG 1.181, “Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)” (Ref. 3), provides guidance on updates to FSARs.
- RG 1.187, “Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments” (Ref. 4), provides guidance that the NRC staff considers acceptable for use when licensees evaluate proposed changes to the facility as described in the FSAR, as updated.
- RG 1.206, “Applications for Nuclear Power Plants” (Ref. 5), provides guidance on the format and content of applications for light water reactors submitted under 10 CFR Part 52.
- NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition” (Ref. 6), provides guidance to the NRC staff for performing safety reviews of applications to construct or operate nuclear power plants under 10 CFR Part 50 and 10 CFR Part 52.
- Interim Staff Guidance (ISG) COL-ISG-025, “Interim Staff Guidance on Changes during Construction under 10 CFR Part 52” (Ref. 7), provides guidance to the NRC staff on the preliminary amendment request (PAR) review process available to 10 CFR Part 52 combined license holders as an elective precursor to a license amendment or exemption request.

## **Purpose of Regulatory Guides**

The NRC issues RGs to describe to the public methods that the staff considers acceptable for use in implementing specific parts of the agency’s regulations, to explain techniques that the staff uses in evaluating specific problems or postulated events, and to provide guidance to applicants. Regulatory guides are not substitutes for regulations, and compliance with them is not required. Methods and solutions that differ from those set forth in RGs will be deemed acceptable if they provide a basis for the findings required for the issuance or continuance of a permit or license by the Commission.

## **Paperwork Reduction Act**

This RG provides voluntary guidance for implementing the mandatory information collections in 10 CFR Parts 50 and 52 that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et. seq.). These information collections were approved by the Office of Management and Budget (OMB), approval numbers 3150-0011 and 3150-0151. Send comments regarding this information collection to the Information Services Branch (T6-A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@nrc.gov), and to the OMB reviewer at: OMB Office of Information and Regulatory Affairs (3150-0011 and 3150-0151), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street, NW Washington, DC20503; e- mail: [oirasubmission@omb.eop.gov](mailto:oirasubmission@omb.eop.gov).

## **Public Protection Notification**

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

## **B. DISCUSSION**

### **Reasons for Issuance**

The NRC is issuing this RG to provide clarity and consistency on the timing of proposed changes to or departures from the design of SSCs of a facility, as described in the FSAR, as updated, being constructed under a COL covered by 10 CFR 52.98(b) and (c). Specifically, this RG addresses the timing of such proposed changes to or departures from the design, as described in the FSAR, as updated, before the Commission has made a finding under 10 CFR 52.103(g), and the timing of submission of such changes to the NRC for regulatory review. This guidance includes the timing of the beginning of construction of SSCs in accordance with proposed departures from the facility design described in the referenced certified design. Changes or departures from the design described in the FSAR, as updated, include both those within the scope of the standard certified design (and described in the “plant-specific design control document (DCD)” as defined in Section VIII of 10 CFR Part 52, Appendices A, B, C, D, E, and F) and those outside the scope of the standard certified design. To the extent feasible, this guidance harmonizes the treatment of changes to or departures from the design of a facility under construction pursuant to a COL as described in the FSAR, as updated, with the treatment of changes to the design of a facility operating under 10 CFR Part 50.

### **Background**

In the 1997 design certification rulemaking for the U.S. Advanced Boiling Water Reactor (ABWR) (Ref. 8), the Commission stated that it modeled 10 CFR Part 52 Appendix A, “Design Certification Rule for the U.S. Advanced Boiling Water Reactor,” Section VIII.B.5, on 10 CFR 50.59. Both provisions then allowed a licensee to make changes to the design of its facility as described in the FSAR (including Tier 2 of the plant-specific DCD) “without prior NRC approval” provided specified criteria are met. Section 50.59 governs “changes to a facility as described in the FSAR,” while Section VIII.B.5 of each design certification appendix to Part 52 governs “[departures] from Tier 2 information.” If a proposed departure from Tier 2 required an amendment, however, then the licensee would be required to obtain NRC approval through the appropriate process set forth in the appendix before implementing the proposed departure. This position reflects the status of Tier 1 and Tier 2 as requirements, as stated in Sections II.E and III.B of each design certification appendix. The text of Section VIII.B.5 of the design certification appendices issued in the 1990’s was similar to 10 CFR 50.59 until the NRC amended 10 CFR 50.59 in 1999 (Ref. 9).

The NRC intended the 1999 amendments to 10 CFR 50.59 to clarify the applicable requirements for a licensee of a facility licensed under Part 50 to determine whether a license amendment was required or not. As relevant here, the 1999 version of the rule deleted the phrase “without prior NRC approval” from the former 10 CFR 50.59(a) and replaced it with “without obtaining a license amendment pursuant to 10 CFR 50.90” in the new 10 CFR 50.59(c)(1). In the 1999 rule, however, the NRC did not modify the provisions of Section VIII in the appendices to 10 CFR Part 52.

One comment on the 10 CFR 50.59 rulemaking in 1999 concerned the requirement to obtain a license amendment before implementing a change that involves a change to a technical specification (TS) or meets one of the criteria in 10 CFR 50.59(c)(2). In response to the comment, the Commission, in the Statement of Considerations for the 1999 10 CFR 50.59 final rule, discussed the timing of “implementation” of a change to the facility under 10 CFR 50.59 vis-à-vis the issuance of an amendment authorizing the proposed change. The Statement of Considerations indicated that a holder of an operating license may install and test a change requiring an amendment under 10 CFR 50.59(c)(2) before the amendment is granted, provided that such installation and testing of the change does not violate a TS or

otherwise meet one of the 10 CFR 50.59(c)(2) criteria for prior approval. The Commission indicated that it did not consider the design change “implemented” until the licensee used the re-designed SSC in facility operations, and that the licensee could do this only if the NRC had already granted an amendment authorizing use of the SSC as redesigned. In addition, the Commission clarified that such installation and testing of a change before receiving NRC approval is at the licensee’s own risk. This means that if the Commission did not grant the requested amendment, the licensee must modify the facility to conform to the description in the FSAR, as updated, before resuming operation of the SSC.

The Commission did not amend 10 CFR Part 52 in 1999 to conform to the 1999 amendments to 10 CFR 50.59 because the Commission anticipated other future rule changes for 10 CFR Part 52 based on an ongoing lessons-learned review. The Commission indicated it would consider proposed changes to 10 CFR Part 52, including the “implementation” of changes subject to amendments, in an integrated fashion. The Commission did modify the Section VIII.B.5 “50.59-like change process” in the 2006 AP1000 design certification rule (10 CFR Part 52, Appendix D, “Design Certification Rule for the AP1000 Design”) (Ref. 10) to replace the term “unreviewed safety question” with the more specific criteria specified in the 1999 rulemaking to replace that term in 10 CFR 50.59. While not relevant to this discussion, the AP1000 design certification rule also defined a new term, “change to a method of evaluation,” consistent with the corresponding changes in the 1999 10 CFR 50.59 rule.

In 2007, the Commission amended 10 CFR Part 52, including amendments to Section VIII.B.5 in each design certification appendix to incorporate the same changes included in the AP1000 design certification rule (Ref. 11). However, the 2007 10 CFR Part 52 comprehensive amendment left Section VIII.B.5.a in each 10 CFR Part 52 appendix certifying a standard design unchanged. Specifically, section VIII.B.5.a of each such 10 CFR Part 52 appendix continues to include the phrase “without prior NRC approval,” which differs from the new text added to 10 CFR 50.59(c)(1) and (2) in 1999 quoted above with respect to implementation. This unchanged text in Section VIII.B.5.a of each 10 CFR Part 52 appendix certifying a standard design is consistent with the Commission’s position stated in the 1997 ABWR design certification rulemaking cited above.

In July 2015, the NRC issued COL-ISG-025 to provide guidance on the use of a PAR process available to combined license holders through a license condition included in every COL issued as of the date of issuance of DG-1321. The PAR process is an elective process by which a combined license holder can opt to submit a request to the NRC seeking a determination on whether the NRC objects to the licensee proceeding with construction changes, subject to strict conditions, before the agency completes its review of the associated license amendment and any associated exemption request from the certification information for a construction change. COL-ISG-025 indicates that changes to the facility that require a license amendment and any associated exemption from certification information would require an NRC determination of “No Objection” to the PAR before the construction of the plant change or modification. (The staff notes that a proposed change to inspections, tests, analyses, and acceptance criteria (ITAAC) that are part of Tier 1 requires an amendment pursuant to 10 CFR 52.98(f) and also requires an exemption under Section VIII.A and 10 CFR 52.63(b). The exemption must meet the standards set forth in 10 CFR 52.7.) However, a “No Objection” finding does not imply preapproval of the associated license amendment and (if applicable) exemption request. The PAR process allows for at-risk construction pending NRC review and approval of the required license amendment and any associated exemption from the certification information.

On October 23, 2018, the Nuclear Energy Institute (NEI) submitted a letter (Ref. 12) requesting that the NRC consider clarifying the requirements for the timing of changes during construction of a facility pursuant to a COL. While the NRC recognizes that additional flexibility during construction may also come at the cost of reduced regulatory stability, the NRC staff has determined that additional flexibility for changes during construction pursuant to a COL is justified. Accordingly, this draft RG

clarifies the timing of when a licensee may begin construction of facility SSCs pursuant to a COL in accordance with a change to or departure from the design of the facility as described in the FSAR, as updated, including Tier 2 of the plant-specific DCD.

### **Basis for the Changes in Guidance**

As explained above and in the final Statement of Considerations for the 1999 rule amending 10 CFR 50.59, for operating plant licenses issued under 10 CFR Part 50, “implementation” of a change to the design of an SSC described in the FSAR begins when the licensee uses the SSC in facility operations. Installation and testing of the SSC, as changed, is not considered “implementation” unless the installation or testing itself would violate a TS or would require an amendment under the criteria of 10 CFR 50.59(c)(2). The NRC staff has determined that licensees may construct or implement changes to an SSC in a plant that is under construction under 10 CFR Part 52 before the NRC has made a final determination on a license amendment subject to specified limitations, similar to the installation and testing of a change to an SSC in an operating plant under Part 50. For an operating plant under 10 CFR Part 50, the NRC must approve an amendment before the licensee may declare the SSC operable or place the SSC in use in the facility. For plants under construction under 10 CFR Part 52, the determination comparable to placing the SSC in use in facility operations (“operability” for SSCs controlled by TS) for a 10 CFR Part 50 facility occurs when the licensee notifies the NRC pursuant to 10 CFR 52.99(c)(1) that the prescribed inspections, tests, and analyses for that SSC have been performed and that the prescribed acceptance criteria have been met. Similar to an operating facility in which a system is not operable while it is out of service for maintenance and testing, there are no immediate nuclear safety consequences for a new facility if facility construction has not been completed and fuel has not been loaded. Given the lack of safety consequences, the NRC has determined to allow licensees to construct SSCs in accordance with changes to the design described in the FSAR, as updated, subject to 10 CFR 52.98(b) or (c)(2) or departures from Tier 2 subject to 10 CFR 52.98(c)(1) for which the licensee has sought or will seek an amendment from the NRC. Under this guidance, such construction will be subject to certain conditions that the licensee must satisfy before it submits the ITAAC notification letter for the SSC to the NRC under 10 CFR 52.99(c)(1) or 10 CFR 52.99(c)(2). This would be consistent with current practice for operating plants, under which licensees may install and test modifications (e.g., during an outage) in parallel with NRC review of required license amendment requests. Before a 10 CFR Part 52 licensee constructing a facility declares an ITAAC complete by submitting an ITAAC closure notice, the design of the SSCs required to meet that ITAAC must be consistent with the design described in the FSAR, as updated, and Tier 2 of the plant-specific DCD. Licensee configuration management programs ensure that changes are properly controlled. The configuration management programs, along with inspections and the ITAAC process itself, provide assurance that the plant is constructed in accordance with the license.

Through the NRC’s Construction Inspection Program (CIP), the NRC staff uses inspections of construction activities to independently verify that the licensee successfully carries out construction activities and identifies and corrects deficiencies that may have an impact on the ITAAC or other construction activities. The staff implements the CIP through Inspection Manual Chapter 2503, “Construction Inspection Program: Inspections of Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) Related Work” (Ref. 13). The results of the CIP are an essential part of the basis for the staff’s determination, in accordance with 10 CFR 52.103(g), that the acceptance criteria have been met. CIP activities can continue while a licensee is constructing SSCs whose design departs from the FSAR, as updated. If the inspection program identifies an SSC that does not match the design described in the FSAR, which would otherwise have been reported as construction findings, the NRC staff will consider the as-found condition of the SSC in connection with pending license amendments, requests for new amendments, and changes to or departures from SSC designs made without NRC approval in accordance with the change process in Section VIII of the appendices to 10 CFR Part 52 or 10 CFR 50.59.

The foregoing background and discussion applies only to the design of a facility described in an FSAR, as updated, including Tier 2, but not Tier 1, as described below. The rationale set forth in the final Statement of Considerations for the 1999 rule amending 10 CFR 50.59 for the Commission's position with respect to operating plants applies to changes governed by 10 CFR 50.59, which corresponds to the change process in Section VIII.B.5 for Tier 2 information. That rationale does not correspond to any provision of Section VIII.A, which governs generic changes to and plant-specific departures from Tier 1. Accordingly, the foregoing rationale for the process applicable to operating plants under Part 50 applies under Part 52 only to the information in the FSAR, as updated, for a facility under construction pursuant to a COL covered by 10 CFR 52.98(b) or the information in the FSAR, as updated, including Tier 2 but not Tier 1 for a facility under construction pursuant to a COL covered by 10 CFR 52.98(c). Nonetheless, a licensee may employ the PAR process for both Tier 1 and Tier 2 as described in COL-ISG-025 if the facility license includes that condition.

### **Harmonization with International Standards**

The International Atomic Energy Agency (IAEA) works with member states and other partners to promote the safe, secure, and peaceful use of nuclear technologies. The IAEA has established a series of safety guides and standards constituting a high level of safety for protecting people and the environment. IAEA safety guides present international good practices and increasingly reflect best practices to help users striving to achieve high levels of safety. Pertinent to this RG, IAEA Safety Guide NS-G-2.3, "Modifications to Nuclear Power Plants," issued October 2001 (Ref. 14), provides guidance and recommendations on controlling activities relating to modifications at nuclear power plants in order to reduce risk and to ensure that the configuration of the plant is at all times under control and that the modified configuration conforms to the approved basis for granting a nuclear power plant operating license. This regulatory guide incorporates similar processes and is consistent with the basic safety principles provided in IAEA Safety Guide NS-G-2.3.

## C. STAFF REGULATORY GUIDANCE

Under 10 CFR 52.98, changes to or departures from the design of a facility under construction pursuant to a COL as described in the facility FSAR, as updated, or Tier 2 are subject to the applicable change processes in Part 50 or the referenced design certification rule, respectively. If the applicable change process requires an amendment to authorize the change or departure, any such amendment is treated in accordance with 10 CFR 50.90. Further, 10 CFR 52.99 requires a licensee to notify the NRC that prescribed inspections, tests, and analyses have been performed, and that prescribed acceptance criteria are met. The staff considers the following acceptable for construction of a facility pursuant to a COL to comply with the design described in the facility FSAR, as updated, including Tier 2 and to comply with the notification requirements of 10 CFR 52.99:

1. If the applicable change process requires a license amendment, a combined license holder may construct an SSC in accordance with a change to the facility described in the FSAR, as updated, for a COL covered by 10 CFR 52.98(b) or (c)(2) or a departure from Tier 2 of the plant-specific DCD for a COL covered by 10 CFR 52.98(c)(1), without first obtaining a license amendment, provided that the following conditions are satisfied:
  - a. A licensee must submit the request for a license amendment required to authorize the change to the facility or departure from Tier 2 of the plant-specific DCD within 45 days after the licensee begins construction of the SSCs subject to the change or departure. Submission of a license amendment request on this schedule would allow for time sufficient to process the license amendment request so that the ITAAC findings and fuel load are not delayed.
  - b. Under this process, a licensee is not permitted to begin construction in accordance with a change to the design as described in the FSAR, as updated, or a design that departs from Tier 2 unless the SSC under construction is located within the restricted area defined in 10 CFR Part 20 and described in the FSAR, as updated, or Tier 2.
  - c. If the NRC does not approve a request for a license amendment as submitted, the licensee is obligated to construct the facility in accordance with the design described in the FSAR, as updated, or the plant-specific DCD. In other words, proceeding with the change before receiving NRC approval is at the licensee's own risk.
  - d. In order to meet the above conditions, the licensee must determine whether a proposed change to the design of the facility as described in the FSAR or a departure from the plant-specific DCD requires an amendment before initiating construction. This is necessary to determine whether the departure affects Tier 1 or the ITAAC.
2. In order to ensure that a change to a facility or departure from Tier 2 that requires an amendment does not alter the basis for the acceptability of an ITAAC, and, for a COL referencing a certified design, to ensure that the facility design described in Tier 2, as changed, is an acceptable method for complying with Tier 1, a licensee may not submit a 10 CFR 52.99(c)(1) ITAAC closure notification unless the change to the design of the SSC subject to the ITAAC has been evaluated and approved under the applicable change process.
3. Although all COLs issued as of the date of this RG include a license condition authorizing PARs, a licensee has the option to use the guidance provided in this RG (and the provisions of its license condition) for a change to or departure from the design of the facility that requires a license amendment and any associated exemption from the certification information.

4. For purposes of this RG, “implementation” of a change to the FSAR, as updated, or a departure from the plant-specific DCD, during construction of a 10 CFR Part 52 facility, refers to when the licensee submits a notification under 10 CFR 52.99(c)(1) or 10 CFR 52.99(c)(2) that applies to the affected SSC.
5. When construction begins, the licensee is encouraged to inform the NRC of the planned request for a license amendment (or the current status of their evaluation). The NRC encourages discussions between the licensee and NRC staff members about future licensing action requests before submission to allow sufficient exchange of information on technical information, schedules, and resource planning. A licensee may voluntarily adopt the process described in Items 1 and 2 above. To voluntarily adopt this process, a licensee should propose a license condition that implements the conditions in Items 1 and 2 above and exemptions from the applicable provisions of sections II.E and III.B of the Part 52 design certification appendix referenced in the COL.

## **D. IMPLEMENTATION**

The NRC staff may use this RG as a reference in its regulatory processes, such as licensing, inspection, or enforcement. However, the NRC staff does not intend to use the guidance in this regulatory guide to support NRC staff actions in a manner that would constitute backfitting as that term is defined in 10 CFR 50.109, “Backfitting,” and as described in NRC Management Directive 8.4, “Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests” (Ref. 15), nor does the NRC staff intend to use the guidance to affect the issue finality of an approval under 10 CFR Part 52. The staff also does not intend to use the guidance to support NRC staff actions in a manner that constitutes forward fitting as that term is defined and described in Management Directive 8.4. If a licensee believes that the NRC is using this RG in a manner inconsistent with the discussion in this Implementation section, then the licensee may file a backfitting or forward fitting appeal with the NRC in accordance with the process in Management Directive 8.4.

## REFERENCES<sup>1</sup>

1. *U.S. Code of Federal Regulations* (CFR), “Licenses, Certifications, and Approvals for Nuclear Power Plants,” Part 52, Chapter 1, Title 10, “Energy.”
2. CFR, “Domestic Licensing of Production and Utilization Facilities,” Part 50, Chapter 1, Title 10, “Energy.”
3. U.S. Nuclear Regulatory Commission (NRC), Regulatory Guide (RG) 1.181, “Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e),” Washington, DC.
4. NRC, RG 1.187, “Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments,” Washington, DC.
5. NRC, RG 1.206, “Applications for Nuclear Power Plants,” Washington, DC.
6. NRC, NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition,” Washington, DC.
7. NRC, COL-ISG-025, “Interim Staff Guidance on Changes during Construction under 10 CFR Part 52,” Washington, DC.
8. NRC, “Standard Design Certification for the U.S. Advanced Boiling Water Reactor Design,” *Federal Register*, Vol. 62, Issue No. 91, May 12, 1997, pp. 25800–25831 (62 FR 25800), Washington, DC, May 12, 1997.
9. NRC, “Changes, Tests, and Experiments,” *Federal Register*, Vol. 64, Issue No. 191, pp. 53582–53617 (64 FR 53582), Washington, DC, October 4, 1999, pp. 53582-53617.
10. NRC, “AP1000 Design Certification,” *Federal Register*, Vol. 71, Issue No. 18, pp. 4464–4482 (71 FR 4464), Washington, DC, January 27, 2006, pp. 4464-4482.
11. NRC, “Licenses, Certifications, and Approvals for Nuclear Power Plants,” *Federal Register*, Vol. 72, Issue No. 166, pp. 49351–49566 (72 FR 49351), Washington, DC, August 28, 2007, pp. 49351-49566.
12. Nuclear Energy Institute (NEI), “NEI White Paper: Assessment of Licensing Impacts on Construction—Experience with Making Changes during Construction under Part 52,” October 23, 2018. (ADAMS Accession No. ML18305B421).
13. NRC, Inspection Manual Chapter 2503, “Construction Inspection Program: Inspections of Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) Related Work,” Washington, DC.

---

<sup>1</sup> Publicly available NRC published documents are available electronically through the NRC Library on the NRC’s public Web site at <http://www.nrc.gov/reading-rm/doc-collections/> and through the NRC’s Agencywide Documents Access and Management System (ADAMS) at <http://www.nrc.gov/reading-rm/adams.html> The documents can also be viewed online or printed for a fee in the NRC’s Public Document Room (PDR) at 11555 Rockville Pike, Rockville, MD. For problems with ADAMS, contact the PDR staff at 301-415-4737 or (800) 397-4209; fax (301) 415-3548; or e-mail [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

14. International Atomic Energy Agency (IAEA), IAEA Safety Standard Series, Safety Guide No. NS-G-2.3, "Modifications to Nuclear Power Plants," Vienna, Austria, 2001.<sup>2</sup>
15. NRC, Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests," Washington, DC.

---

2 Copies of International Atomic Energy Agency (IAEA) documents may be obtained through their Web site: [WWW.IAEA.Org/](http://WWW.IAEA.Org/) or by writing the International Atomic Energy Agency, P.O. Box 100 Wagramer Strasse 5, A-1400 Vienna, Austria.