Unofficial Redline of the NRC's Proposed Rule: American Society of Mechanical Engineers Code Cases and Update Frequency

NRC-2018-0291; RIN 3150-AK23; 88 FR 13717

U.S. Nuclear Regulatory Commission
Office of Nuclear Material Safety and Safeguards
Division of Rulemaking, Environmental, and Financial Support

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Introduction

The U.S. Nuclear Regulatory Commission (NRC) is releasing this unofficial, informal redline to assist industry and other stakeholders in reviewing the changes that the proposed rule titled "American Society of Mechanical Engineers Code Cases and Update Frequency" would make to the regulatory text of 10 CFR 50.55a, "Codes and standards." The NRC published the proposed rule on March 6, 2023 (88 FR 13717), in the *Federal Register* for public comment with a 60-day public comment period.

The underlying (unmarked) text in this document reflects the existing text of the regulations. The changes that the proposed rule would make to NRC's regulations, if the NRC were to adopt the changes as proposed, are marked in **red** for deletions and **blue** for additions.

This redline is not a substitute for reviewing the proposed rule. If any conflicts exist between this redline and the text of the proposed rule, the documents published in the *Federal Register* are the controlling documents. Please note the proposed rule may show certain replacement instructions with additional deletions and additions that result in no net change (for example, replace "120-month interval" with code of record interval" – there would be no net change for the word "interval"). This redline is meant to only capture the net changes for ease of reading (for example, code of record ~~120-month~~ interval).

Based on eCFR (https://www.ecfr.gov) as of 2/7/2023 and the published proposed rule (88 FR 13717).

§ 50.55a Codes and standards.

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(a) ***Documents approved for incorporation by reference.*** The ~~standards~~material listed in this paragraph (a) ~~have been approved for incorporation~~ is incorporated by reference ~~by~~into this section with the approval of the Director of the Federal Register ~~pursuant to~~ under 5 U.S.C. 552(a) and 1 CFR part 51. ~~The standards are~~All approved material is available for inspection~~, by appointment, at~~ at the Nuclear Regulatory Commission (NRC) and at the National Archives and Records Administration (NARA). Contact NRC at: the NRC Technical Library, which is located at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland 20852; telephone: 301–415–7000; email: *Library.Resource@nrc.gov*.~~; or at the National Archives and Records Administration (NARA).~~ For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations.html* or email *fr.inspection@nara.gov*. ~~or go to *www.archives.gov/federal-register/cfr/ibr-locations.html*.~~

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(3) ***U.S. Nuclear Regulatory Commission (NRC) Public Document Room*** * * *

(i) ***NRC Regulatory Guide 1.84, Revision ~~39~~40.*** NRC Regulatory Guide 1.84, Revision ~~39~~40, "Design, Fabrication, and Materials Code Case Acceptability, ASME Section III," issued ~~December 2021~~January 2023, with the requirements in paragraph (b)(4) of this section.

(ii) ***NRC Regulatory Guide 1.147, Revision ~~20~~21.*** NRC Regulatory Guide 1.147, Revision ~~20~~21, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," issued ~~December 2021~~January 2023, which lists ASME Code Cases that the NRC has approved in accordance with the requirements in paragraph (b)(5) of this section.

(iii) ***NRC Regulatory Guide 1.192, Revision ~~4~~5.*** NRC Regulatory Guide 1.192, Revision ~~3~~5, "Operation and Maintenance Code Case Acceptability, ASME OM Code," issued ~~December 2021~~January 2023, which lists ASME Code Cases that the NRC has approved in accordance with the requirements in paragraph (b)(6) of this section.

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(b) ***Use and conditions on the use of standards.*** * * *

(5) ***Conditions on inservice inspection Code Cases.*** Licensees may apply the ASME BPV Code Cases listed in NRC Regulatory Guide 1.147, as incorporated by reference in paragraph (a)(3)(ii) of this section, without prior NRC approval, subject to the following:

(i) ***ISI Code Case condition: Applying Code Cases.*** When a licensee initially applies a listed Code Case, the licensee must apply the most recent version of

that Code Case incorporated by reference in paragraph (a) of this section.

(ii) ***ISI Code Case condition: Applying different revisions of Code Cases.*** If a licensee has previously applied a Code Case and a later version of the Code Case is incorporated by reference in paragraph (a) of this section, the licensee may continue to apply, to the end of the current code of record ~~120-month~~ interval, the previous version of the Code Case, as authorized, or may apply the later version of the Code Case, including any NRC-specified conditions placed on its use. Licensees who choose to continue use of the Code Case during subsequent code of record ~~120-month ISI program~~ intervals will be required to implement the latest version incorporated by reference into this section as listed in Tables 1 and 2 of NRC Regulatory Guide 1.147, as incorporated by reference in paragraph (a)(3)(ii) of this section.

(iii) ***ISI Code Case condition: Applying annulled Code Cases.*** Application of an annulled Code Case is prohibited unless a licensee previously applied the listed Code Case prior to it being listed as annulled in NRC Regulatory Guide 1.147. If a licensee has applied a listed Code Case that is later listed as annulled in NRC Regulatory Guide 1.147, the licensee may continue to apply the Code Case to the end of the current code of record ~~120-month~~ interval.

(6) ***Conditions on ASME OM Code Cases.*** Licensees may apply the ASME OM Code Cases listed in NRC Regulatory Guide 1.192, as incorporated by reference in paragraph (a)(3)(iii) of this section, without prior NRC approval, subject to the following:

(i) ***OM Code Case condition: Applying Code Cases.*** When a licensee initially applies a listed Code Case, the licensee must apply the most recent version of that Code Case incorporated by reference in paragraph (a) of this section.

(ii) ***OM Code Case condition: Applying different revisions of Code Cases.*** If a licensee has previously applied a Code Case and a later version of the Code Case is incorporated by reference in paragraph (a) of this section, the licensee may continue to apply, to the end of the current code of record ~~120-month~~ interval, the previous version of the Code Case, as authorized, or may apply the later version of the Code Case, including any NRC-specified conditions placed on its use. Licensees who choose to continue use of the Code Case during subsequent code of record ~~120-month ISI program~~ intervals will be required to implement the latest version incorporated by reference into this section as listed in Tables 1 and 2 of NRC Regulatory Guide 1.192, as incorporated by reference in paragraph (a)(3)(iii) of this section.

(iii) ***OM Code Case condition: Applying annulled Code Cases.*** Application of an annulled Code Case is prohibited unless a licensee previously applied the listed Code Case prior to it being listed as annulled in NRC Regulatory Guide 1.192. If a licensee has applied a listed Code Case that is later listed as annulled in NRC Regulatory Guide 1.192, the licensee may continue to apply the Code Case to the end of the current code of record ~~120-month~~ interval.

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(f) ***Preservice and inservice testing requirements.*** * * *

(4) ***Inservice testing standards requirement for operating plants.*** Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves that are within the scope of the ASME OM Code must meet the inservice test requirements (except design and access provisions) set forth in the ASME OM Code and addenda that become effective subsequent to editions and addenda specified in paragraphs (f)(2) and (3) of this section and that are incorporated by reference in paragraph (a)(1)(iv) of this section, to the extent practical within the limitations of design, geometry, and materials of construction of the components. The inservice test requirements for pumps and valves that are within the scope of the ASME OM Code but are not classified as ASME BPV Code Class 1, Class 2, or Class 3 may be satisfied as an augmented IST program. This use of an augmented IST program is acceptable without prior NRC approval provided the basis for deviations from the ASME OM Code, as incorporated by reference in this section, demonstrates an acceptable level of quality and safety, or that implementing the Code provisions would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, where documented and available for NRC review. When using the 2006 Addenda or later of the ASME BPV Code, Section XI, the inservice examination, testing, and service life monitoring requirements for dynamic restraints (snubbers) must meet the requirements set forth in the applicable ASME OM Code as specified in paragraph (b)(3)(v)(B) of this section. When using the 2005 Addenda or earlier edition or addenda of the ASME BPV Code, Section XI, the inservice examination, testing, and service life monitoring requirements for dynamic restraints (snubbers) must meet the requirements set forth in either the applicable ASME OM Code or ASME BPV Code, Section XI as specified in paragraph (b)(3)(v) of this section.

(i) ***Applicable IST Code: ~~Applicable IST Code:~~ Initial ~~120-month~~code of record interval.*** Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during the initial ~~120-month~~code of record interval must comply with the requirements in the latest edition and addenda of the ASME OM Code incorporated by reference in paragraph (a)(1)(iv) of this section on the date no more than 18 months before the date of issuance of the operating license under this part, or no more than 18 months before the date scheduled for initial loading of fuel under a combined license under part 52 of this chapter (or the optional ASME OM Code Cases listed in NRC Regulatory Guide 1.192, as incorporated by reference in paragraph (a)(3)(iii) of this section, subject to the conditions listed in paragraph (b) of this section).

(ii) ***Applicable IST Code: Successive ~~120-month~~code of record intervals.*** Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during successive ~~120-month~~code of record intervals must comply with the requirements of the latest edition and

addenda of the ASME OM Code incorporated by reference in paragraph (a)(1)(iv) of this section no more than 18 months before the start of the ~~120-month~~code of record interval (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147 or NRC Regulatory Guide 1.192 as incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section, respectively), subject to the conditions listed in paragraph (b) of this section.

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(f) ***Preservice and inservice testing requirements.*** * * *

(5) ***Requirements for updating IST programs -***

(i) ***IST program update: Applicable IST Code editions and addenda.*** The inservice test program for a boiling or pressurized water-cooled nuclear power facility must be revised by the licensee, as necessary, to meet the requirements of paragraph (f)(4) of this section.

(ii) ***IST program update: Conflicting IST Code requirements with technical specifications.*** If a revised inservice test program for a facility conflicts with the technical specifications for the facility, the licensee must apply to the Commission for amendment of the technical specifications to conform the technical specifications to the revised program. The licensee must submit this application, as specified in § 50.4, at least 6 months before the start of the period during which the provisions become applicable, as determined by paragraph (f)(4) of this section.

(iii) ***IST program update: Notification of impractical IST Code requirements.*** If the licensee has determined that conformance with certain Code requirements is impractical for its facility, the licensee must notify the Commission and submit, as specified in § 50.4, information to support the determination.

(iv) ***IST program update: Schedule for completing impracticality determinations.*** Where a pump or valve test requirement by the Code or addenda is determined to be impractical by the licensee and is not included in the revised inservice test program (as permitted by paragraph (f)(4) of this section), the basis for this determination must be submitted for NRC review and approval not later than 12 months after the expiration of the initial inservice examination and test interval ~~120-month interval of operation~~ from the start of facility commercial operation and each subsequent inservice examination and test interval~~120-month interval of operation~~ during which the test is determined to be impractical.

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(f) ***Preservice and inservice testing requirements.*** * * *

(7) ***Inservice testing reporting requirements.*** Inservice Testing Program Test and Examination Plans (IST Plans) for pumps, valves, and dynamic restraints (snubbers)

prepared to meet the requirements of the ASME OM Code must be submitted to the NRC as specified in § 50.4. IST Plans must be submitted within 90 days of their implementation for the applicable inservice examination and test interval~~120-month IST Program interval~~. Electronic submission is preferred.

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(g) ***Preservice and inservice inspection requirements.*** * * *

(4) ***Inservice inspection standards requirement for operating plants.*** Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) that are classified as ASME BPV Code Class 1, Class 2, and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions and addenda of the ASME BPV Code that become effective subsequent to editions specified in paragraphs (g)(2) and (3) of this section and that are incorporated by reference in paragraph (a)(1)(ii) or (iv) of this section for snubber examination and testing of this section, to the extent practical within the limitations of design, geometry, and materials of construction of the components. Components that are classified as Class MC pressure retaining components and their integral attachments, and components that are classified as Class CC pressure retaining components and their integral attachments, must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of the ASME BPV Code and addenda that are incorporated by reference in paragraph (a)(1)(ii) of this section subject to the condition listed in paragraph (b)(2)(vi) of this section and the conditions listed in paragraphs (b)(2)(viii) and (ix) of this section, to the extent practical within the limitation of design, geometry, and materials of construction of the components. When using the 2006 Addenda or later of the ASME BPV Code, Section XI, the inservice examination, testing, and service life monitoring requirements for dynamic restraints (snubbers) must meet the requirements set forth in the applicable ASME OM Code as specified in paragraph (b)(3)(v)(B) of this section. When using the 2005 Addenda or earlier edition or addenda of the ASME BPV Code, Section XI, the inservice examination, testing, and service life monitoring requirements for dynamic restraints (snubbers) must meet the requirements set forth in either the applicable ASME OM Code or ASME BPV Code, Section XI as specified in paragraph (b)(3)(v) of this section.

(i) ***Applicable ISI Code: Initial ~~120-month~~code of record interval.*** Inservice examination of components and system pressure tests conducted during the initial ~~120-month inspection~~code of record interval must comply with the requirements in the latest edition and addenda of the ASME BPV Code incorporated by reference in paragraph (a) of this section on the date no more than 18 months before the date of issuance of the operating license under this part, or no more than 18 months before the date scheduled for initial loading of fuel under a combined license under part 52 of this chapter (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, when using ASME BPV Code, Section XI, or NRC Regulatory Guide 1.192, when using the ASME

OM Code, as incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section, respectively), subject to the conditions listed in paragraph (b) of this section. Licensees may, at any time in their ~~120-month ISI~~code of record interval, elect to use the Appendix VIII in the latest edition and addenda of the ASME BPV Code incorporated by reference in paragraph (a) of this section, subject to any applicable conditions listed in paragraph (b) of this section. Licensees using this option must also use the same edition and addenda of Appendix I, Subarticle I–3200, as Appendix VIII, including any applicable conditions listed in paragraph (b) of this section.

(ii) ***Applicable ISI Code: Successive ~~120-month~~code of record intervals.*** Inservice examination of components and system pressure tests conducted during successive ~~120-month inspection~~code of record intervals must comply with the requirements of the latest edition and addenda of the ASME BPV Code incorporated by reference in paragraph (a) of this section no more than 18 months before the start of the ~~120-month inspection~~code of record interval (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, when using ASME BPV Code, Section XI, or NRC Regulatory Guide 1.192, when using the ASME OM Code, as incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section), subject to the conditions listed in paragraph (b) of this section. ~~However, a licensee whose inservice inspection interval commences during the 12 through 18-month period after June 3, 2020, may delay the update of their Appendix VIII program by up to 18 months after June 3, 2020. Alternatively, licensees may, at any time in their 120-month ISI~~ Licensees may, at any time in their code of record interval, elect to use the Appendix VIII in the latest edition and addenda of the ASME BPV Code incorporated by reference in paragraph (a) of this section, subject to any applicable conditions listed in paragraph (b) of this section. Licensees using this option must also use the same edition and addenda of Appendix I, Subarticle I–3200, as Appendix VIII, including any applicable conditions listed in paragraph (b) of this section.

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(g) ***Preservice and inservice inspection requirements.*** * * *

(5) ***Requirements for updating ISI programs -***

(i) ***ISI program update: Applicable code of record~~ISI Code editions and addenda~~.*** The inservice inspection program for a boiling or pressurized water-cooled nuclear power facility must be revised by the licensee, as necessary, to meet the requirements of paragraph (g)(4) of this section.

(ii) ***ISI program update: Conflicting ISI Code requirements with technical specifications.*** If a revised inservice inspection program for a facility conflicts with the technical specifications for the facility, the licensee must apply to the Commission for amendment of the technical specifications to conform the technical specifications to the revised program. The licensee must submit this

application, as specified in § 50.4, at least six months before the start of the code of record interval ~~period~~ during which the provisions become applicable, as determined by paragraph (g)(4) of this section.

(iii) ***ISI program update: Notification of impractical ISI Code requirements.*** If the licensee has determined that conformance with a Code requirement is impractical for its facility the licensee must notify the NRC and submit, as specified in § 50.4, information to support the determinations. Determinations of impracticality in accordance with this section must be based on the demonstrated limitations experienced when attempting to comply with the Code requirements during the ~~inservice~~ inspection interval for which the request is being submitted. Requests for relief made in accordance with this section must be submitted to the NRC no later than 12 months after the expiration of the initial or subsequent ~~120-month~~ inspection interval for which relief is sought.

(iv) ***ISI program update: Schedule for completing impracticality determinations.*** Where the licensee determines that an examination required by Code edition or addenda is impractical, the basis for this determination must be submitted for NRC review and approval not later than 12 months after the expiration of the initial or subsequent ~~120-month~~ inspection interval for which relief is sought.

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(y) ***Definitions.***

(1) *Code of record* means:

(i) For the ASME BPV Code, Section XI, the edition (and addenda) implemented by a licensee in accordance with the requirements of this section.

(ii) For the ASME OM Code, the edition (and addenda) implemented by a licensee in accordance with the requirements of this section.

(iii) For the ASME BPV Code, Section III, the edition implemented by a licensee in accordance with the requirements of this section, which may vary by component.

(2) *Code of record interval* means the period of time between the code of record updates required by paragraphs (f)(4) and (g)(4) of this section for the inservice inspection and inservice examination and test programs, respectively.

(i) For licensees with codes of record prior to ASME BPV Code, Section XI, 2019 Edition, and OM Code, 2020 Edition, as incorporated by reference in paragraph (a) of this section, the code of record interval is the same as the inspection interval or inservice examination and test interval.

(ii) For licensees with codes of record of ASME BPV Code, Section XI, 2019 Edition and OM Code, 2020 Edition, or later, as incorporated by reference in

paragraph (a) of this section, the code of record interval is two consecutive inservice inspection or inservice examination and test intervals.

(3) *Inservice examination and test (IST) interval*, for the purposes of this section, means the inservice examination and test interval described by the licensee's code of record (paragraph ISTA–3120 of the ASME OM Code, 2001 Edition through 2009 Edition, or paragraph ISTA–3120 of the ASME OM Code, 2012 Edition and later).

(4) *Inservice inspection (ISI) program*, for the purposes of this section, means the set of all administrative and technical requirements pertaining to periodic examination of nuclear components, as specified in ASME BPV Code, Section XI, and this section, including but not limited to:

(i) The requirements of IWA–2400 of ASME BPV Code, Section XI, 1991 Addenda and later.

(ii) Relief requested under paragraph (g)(5)(iii) of this section and granted under paragraph (g)(6)(i) of this section.

(iii) The augmented inspection program described in paragraph (g)(6) of this section.

(iv) Alternatives authorized under paragraph (z) of this section.

(5) *Inservice examination and testing (IST) program*, for the purposes of this section, means the requirements for preservice and inservice examination and testing of pumps, valves, and dynamic restraints within the scope of this section to assess their operational readiness in nuclear power plants, including but not limited to:

(i) The requirements specified in the ASME OM Code, as incorporated by reference in this section, such as for test or examination, responsibilities, methods, intervals, parameters to be measured and evaluated, criteria for evaluating the results, corrective action, personnel qualification, and recordkeeping.

(ii) Relief requested under paragraph (f)(5)(iii) of this section and granted under paragraph (f)(6)(i) of this section.

(iii) Augmented IST requirements as applied by the Commission under paragraph (f)(6)(ii) of this section.

(iv) Alternatives authorized under paragraph (z) of this section.

(6) *Inspection interval*, as used in this section, means the inservice inspection interval described by the licensee's code of record (Article IWA–2432 of ASME BPV Code, Section XI, 1989 Edition with 1991 Addenda through the 2008 Addenda, or Article IWA–2431 of ASME BPV Code, Section XI, 2009 Addenda and later).

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Appendix J to Part 50—Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors

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Option A--Prescriptive Requirements

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III. Leakage Test Requirements. * * *

D. ***Periodic retest schedule -*** * * *

1. ***Type A test.*** * * *

(a) After the preoperational leakage rate tests, a set of three Type A tests shall be performed, at approximately equal intervals during each inspection interval, as defined in § 50.55a(y). ~~10-year service period.~~ The third test of each set shall be conducted when the plant is shutdown for the ~~10-year~~final plant inservice inspections~~.~~ of the inspection interval.

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Footnotes - Appendix J to Part 50

[1] Such inservice inspections are required by § 50.55a.

[2] ~~Such inservice inspections are required by § 50.55a~~Reserve.

[3] Specific guidance concerning a performance-based leakage-test program, acceptable leakage-rate test methods, procedures, and analyses that may be used to implement these requirements and criteria are provided in Regulatory Guide 1.163, “Performance-Based Containment Leak-Test Program.”

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