

SUPPORTING STATEMENT FOR
INFORMATION COLLECTIONS CONTAINED IN
INCORPORATION BY REFERENCE OF AMERICAN SOCIETY OF MECHANICAL
ENGINEERS CODE EDITIONS
FINAL RULE

10 CFR PART 50

(RIN-3150-AK22)

Description of the Information Collection

The U.S. Nuclear Regulatory Commission (NRC) regulations incorporate by reference American Society of Mechanical Engineers (ASME) codes for nuclear power plants. The ASME periodically revises and updates its codes for nuclear power plants. The final NRC rule, which is the subject of this supporting statement, is the latest in a series of rulemakings to amend the NRC's regulations to incorporate by reference revised and updated ASME codes for nuclear power plants. This action is intended to maintain the safety of nuclear power plants and to make NRC activities more effective and efficient.

The NRC's regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a incorporate by reference Division 1 of Section III, "Rules for Construction of Nuclear Facility Components," and Division 1 of Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components" of the ASME Boiler and Pressure Vessel Code (BPV Code). The NRC's regulations also incorporate by reference the ASME "Operation and Maintenance of Nuclear Power Plants," Division 1, OM Code: Section IST (OM Code). These rules of the ASME BPV and OM Codes set forth the requirements to which nuclear power plant components are designed, constructed, tested, repaired, and inspected. The NRC also incorporates by reference the American Society of Mechanical Engineers OM Code Case OMN-28, "Alternative Valve Position Verification Approach to Satisfy ISTC-3700 for Valves Not Susceptible to Stem-Disk Separation," the 2011 Addenda to ASME NQA-1-2008, Quality Assurance Requirements for Nuclear Facility Applications (ASME NQA-1b-2011), and the 2012 and 2015 Editions of ASME NQA-1, Quality Assurance Requirements for Nuclear Facility Applications. In developing this final rule, the NRC staff reviewed revisions to the codes and determined the acceptability of each change. The NRC will publish its findings in the final rule which incorporates the codes by reference and states which portions of the codes are mandatory, acceptable, or conditionally acceptable.

The information collection requirements imposed by 10 CFR 50.55a through incorporation by reference of the ASME Codes apply to activities associated with the construction and operation of nuclear power plants. In general, the records prepared are not collected by the NRC, but are retained by the licensee to be made available to the NRC, if requested, at the time of an NRC audit. This rule will apply after the effective date of the final rule for current and future nuclear power plant licensees.

Overview of Implementation

The final rule specifies schedule requirements for compliance with the rule for existing operating license holders as well as holders of new reactor construction permits, combined licenses, and applicants for standard design certifications. The following discussion describes the changes to

the information collection burden associated with this final rule, as well as the implementation expectations for the provisions of this final rule.

Inservice Testing and Inservice Inspection Program Updates

Licensees of nuclear power plants are required to update their inservice testing (IST) and inservice inspection (ISI) programs every 10 years in accordance with the requirements of the latest edition and addenda of the ASME Code that have been incorporated by reference into 10 CFR 50.55a as of 18 months prior to the start of the next inspection and testing intervals.

This final rule incorporates by reference ASME BPV Code Edition from 2019 and ASME OM Code Edition from 2020. The incorporation by reference of the latest codes in 10 CFR 50.55a does not incur additional information collection burden as there is no change in recordkeeping and reporting burden associated with this change.

Voluntary Use of Later Codes

Paragraphs 10 CFR 50.55a(f)(4)(iv) and (g)(4)(iv) require that inservice tests of pumps and valves, inservice examinations of components, and system pressure tests meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in 10 CFR 50.55a subject to the limitations and modifications listed in 10 CFR 50.55a(b) and subject to Commission approval.

This final rule incorporates by reference the 2019 Edition of the ASME BPV Code and the 2020 Edition of the ASME OM Code. Licensees may use the later editions and addenda if the Code of record at their plant is the earlier editions and addenda of the ASME Code. However, licensees are required to request Commission approval via a letter to use these subsequent editions and addenda as discussed in NRC Regulatory Issue Summaries 2004-12 and 2004-16. As discussed in NRC Regulatory Issue Summary 2004-12, the amount of written documentation needed for a request to use a later Code edition and addenda that has been incorporated by reference into 10 CFR 50.55a is significantly less than that for a relief request or a request to use an alternative requirement, so the information collection burden associated with a request to use a subsequent edition and addenda is less than the burden associated with an alternative request under 10 CFR 50.55a(z) or a relief request under 10 CFR 50.55a(f)(5)(iii) or (g)(5)(iii).

Alternative Requests

Paragraph (z) of 10 CFR 50.55a allows applicants to use alternatives to the requirements of 10 CFR 50.55a paragraphs (b), (c), (d), (e), (f), (g), and (h) when authorized by the NRC. The NRC anticipates that there will be a reduction in the number of alternative requests under 10 CFR 50.55a(z) as a result of this final rule.

Relief Requests

The NRC does not anticipate that there will be a change in the number of relief requests under 10 CFR 50.55a(f)(5)(iii) or (g)(5)(iii) as a result of this final rule.

Substantive Provisions in the Final Rule

The NRC anticipates a decrease in information collection burden associated with the substantive provisions in the final rule briefly described below:

- Section III Condition: Weld Leg Dimensions. The NRC is amending paragraph (b)(1)(ii) to extend the applicability of the condition to users of the latest edition of the ASME BPV Code, Section III incorporated by reference in paragraph (a)(1)(i). This condition prohibits applicants and licensees using the ASME BPV Code, Section III, 1989 Addenda through the 2013 Edition, and 2011 Addenda through the 2017 Edition, from using certain Section III provisions identified in Table I of this section, for welds with leg size less than $1.09 t_n$. This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Section III Condition: Seismic Design of Piping. The NRC is amending paragraph (b)(1)(iii) to extend the applicability of the conditions to users of the latest edition of the ASME BPV Code, Section III incorporated by reference in paragraph (a)(1)(i). This condition allows applicants and licensees using the ASME BPV Code Section III, 2006 Addenda through the 2017 Edition, to use Subarticles NB-3600, NC-3600, and ND-3600 for the seismic design of piping, subject to certain conditions. This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Section III Condition: Quality Assurance. The NRC is amending paragraph (b)(1)(iv) to allow the use of the 2015 Edition of NQA-1, "Quality Assurance Requirements for Nuclear Facility Applications," referenced in the 2019 Edition of the ASME BPV Code, Section III, Subsection NCA, Article 7000. This condition allows the applicants and licensees applying editions and addenda later than the 1989 Edition of Section III, to use the requirements of the 1994 Edition, 2008 Edition, and 2009-1a Addenda to the 2008 Edition of NQA-1 to comply with the commitments contained in the applicant's or licensee's quality assurance program description. The existing 10 CFR 50.54(a)(3) regulations allow licensees to make changes to a previously accepted quality assurance program description (QAPD) included or referenced in the Safety Analysis Report without prior NRC approval, provided the change does not reduce the commitments in the program description as accepted by the NRC. Regulations in 10 CFR 50.54(a)(4) state that the licensees who make changes to the QAPD that reduce the commitments, must submit these changes to the NRC for review and approval prior to implementation. Therefore, the implementation of this final rule will not incur additional information collection burden because it is already required under existing § 50.54(a)(4) requirements.
- Section III Condition: Capacity Certification and Demonstration of Function of Incompressible-Fluid Pressure-Relief Valves. The is amending paragraph (b)(1)(vii) to extend the applicability of the condition through the latest edition of the ASME BPV Code, Section III incorporated by reference in paragraph (a)(1)(i). This condition allows applicants and licensees using the ASME BPV Code, Section III, 2006 Addenda through the 2017 Edition, to use paragraph NB-7742, with the exception of paragraph NB-7742(a)(2), when certifying certain valve designs. This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.

- Section III Condition: Visual Examination of Bolts, Studs and Nuts. The NRC is amending paragraph (b)(1)(x) to extend the applicability of the condition through the latest edition of the ASME BPV Code, Section III incorporated by reference in paragraph (a)(1)(i). This condition consists of two provisions. The first provision states that when applicants or licensees are applying the provisions of NB-2582, NC-2582, ND-2582, NE-2582, NF-2582, and NG-2582 in the 2017 Edition of Section III, the visual examinations are required to be performed in accordance with procedures qualified to NB-5100, NC-5100, ND-5100, NE-5100, NF-5100, and NG-5100 and performed by personnel qualified in accordance with NB-5500, NC-5500, ND-5500, NE-5500, NF-5500, and NG-5500. The second provision states that when applicants or licensees are applying the provisions of NB-2582, NC-2582, ND-2582, NE-2582, NF-2582, and NG-2582 in the 2017 Edition of Section III, that bolts, studs, and nuts must be visually examined for discontinuities including cracks, bursts, seams, folds, thread laps, voids, and tool marks. This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Section III Condition: Preservice Inspection of Steam Generator Tubes. The NRC is adding a new paragraph 50.55a(b)(1)(xiii) with conditions on the use of provisions of NB-5283 and NB-5360 in the 2019 Edition of Section III. This condition contains two provisions. The first provision requires that a full-length preservice examination of 100 percent of the steam generator tubing in each newly installed steam generator be performed prior to plant startup. The 2019 Edition of ASME Section III does not require these preservice examinations to be performed, therefore, the NRC is adding this condition to ensure that steam generator tubing has an adequate baseline examination and ensure tubing's structural integrity to perform its intended function. The second provision requires that when using provisions of NB-5360 in the 2019 Edition of Section III, flaws revealed during preservice examination of steam generator tubing performed in accordance with the requirements of the first provision must be evaluated using the criteria in the design specifications. The staff notes that the 2017 Edition of ASME Code contains requirements for preservice examination of steam generator tubing, however, the 2019 Edition does not require these preservice examinations of steam generator tubing to be performed, including the acceptance criteria. Since the new condition restores the requirements that were removed from the latest edition of the ASME Code, the condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Removal of older editions and addenda of Section XI prior to 2001 Edition. The NRC is removing incorporation by reference of editions and addenda of Section XI prior to 2001 in § 50.55a(a)(1)(ii), which are no longer in use by licensees due to the requirement in § 50.55a(g)(4) to update ISI programs for subsequent 10-year inspection intervals or references by conditions in § 50.55a(b)(2). As a result, the NRC is amending regulations in § 50.55a paragraphs (b)(2)(viii), (b)(2)(ix), (b)(2)(xii), (b)(2)(xiv), (b)(2)(xv), (b)(2)(xviii)(A), (b)(2)(xix), and (b)(2)(xx), to remove references to these older editions and addenda. With the removal of these earlier editions, the NRC is also deleting paragraphs (b)(2)(viii)(A) through (D) and (b)(2)(ix)(C) through (E), as these conditions apply to these earlier editions. The removal of incorporation by reference of older editions and addenda of Section XI and the corresponding changes to affected condition will result in no incremental change in recordkeeping or reporting burden, since these editions and addenda are no longer in use by licensees.

- Section XI Condition: Quality Assurance. The NRC is amending paragraph (b)(1)(x) to approve for use the version of NQA-1 referenced in the 2019 Edition of the ASME BPV Code, Section XI, Table IWA 1600-1, "Referenced Standards and Specifications." The NRC is also revising this condition to remove the reference to IWA-1400 because it does not reference editions of NQA-1, for clarification purposes. The existing 10 CFR 50.54(a)(3) regulations allow licensees to make changes to a previously accepted QAPD included or referenced in the Safety Analysis Report without prior NRC approval, provided the change does not reduce the commitments in the program description as accepted by the NRC. Regulations in 10 CFR 50.54(a)(4) state that the licensees who make changes to the QAPD that reduce the commitments, must submit these changes to the NRC for review and approval prior to implementation. Therefore, the implementation of this final rule will not incur additional information collection burden because it is already required under existing § 50.54(a)(4) requirements.
- Section XI Condition: NDE Personnel Certification: Fourth Provision. The NRC is amending paragraph (b)(2)(xviii) to address the removal of ASME BPV Code, Section XI, 2011 Addenda from § 50.55a(a)(1)(ii). The NRC is also amending the condition in paragraph (b)(2)(xviii)(D) to add an alternative that would allow the use of laboratory practice as a partial substitute for ultrasonic examination personnel certification. This alternative results in personnel completing their ultrasonic examination certification in less time than under current requirements. Specifically, the alternative allows the 250 hours of Level I experience to be reduced to 175 hours, which includes a minimum of 125 hours of field experience and 50 hours of laboratory practice, and the 800 hours of Level II experience to be reduced to 720 hours, of which a minimum of 400 hours must be field experience and 320 hours of laboratory practice. The staff estimates that the time to complete the ultrasonic examination certifications can be reduced on average by about 78 hours for each person. The staff expects that about 9 people at each power plant facility will complete certifications using this alternative of laboratory practice over the applicability period of this rule. Because a person only needs to complete certification once, the use of this condition will result in a one-time cost savings (benefit) to the industry. The staff estimates there may be a negligible averted recordkeeping and reporting burden as a result of the reduction in the number of hours required for Level I and Level II certifications, because licensees will still be required to keep records of all field experience and laboratory hours required for such certifications.
- Section XI Condition: System Leakage Tests: Third Provision. The NRC is amending paragraph (b)(2)(xx)(C) to extend the applicability of the condition through the latest edition of the ASME BPV Code, Section XI incorporated by reference in § 50.55a(a)(1)(ii). The NRC is also amending paragraph (b)(2)(xx)(C) to reflect that IWB-5210(c) was deleted from the 2019 Edition because it contained verbiage that was redundant to the language in IWA-5213(b)(2) and IWA-5221(d). This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Section XI Condition: Table IWB-2500-1 Examination Requirements. The NRC is amending paragraph (b)(2)(xxi)(B) to extend the applicability of the condition through the latest edition of the ASME BPV Code, Section XI incorporated by reference in § 50.55a(a)(1)(ii). This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.

- Section XI Condition: Mitigation of Defects by Modification: Second Provision. The NRC is amending paragraph (b)(2)(xxv)(B) to extend the applicability of the condition through the latest edition of the ASME BPV Code, Section XI incorporated by reference in § 50.55a(a)(1)(ii). In addition, the NRC is amending paragraph (b)(2)(xxv)(B) by revising requirements associated with: 1) conducting wall thickness examinations at alternative locations; and 2) follow on examination requirements for external corrosion of buried piping. The changes in paragraph (b)(2)(xxv)(B) are as follows:

Paragraph (b)(2)(xxv)(B)(2) requires licensees to establish a loss of material rate by conducting wall thickness examinations at the location of the defect and establishes the requirements for the timing of such examinations. The NRC is providing an alternative by allowing loss of material rates to be measured at an alternative location, provided certain criteria are met. Allowing an alternative equivalent location to be used to obtain loss of material rates provides flexibility and reduces unnecessary burden. In addition, the NRC is deleting the timing of examination requirements because the 2 times multiplier required by the condition provides a conservative bias for measured loss of material rates.

Paragraph (b)(2)(xxv)(B)(3) requires licensees to conduct wall thickness examinations on a refueling outage interval until projected flaw growth rates have been validated. After validation of the flaw growth rate, the modifications are required to be examined at half its expected life or once per interval. The NRC is deleting the refueling outage interval examinations and only require that the examination occur at half the modification's expected life or, if the modification has an expected life greater than 19 years, once per interval.

Paragraph (b)(2)(xxv)(B)(3)(ii) requires licensees to examine a buried pipe modification location, where loss of material has occurred due to external corrosion, at half its expected life or 10 years, whichever is sooner. The NRC is revising this condition to include a provision that would allow an extension of the required inspection to any time in the first full 10-year inspection interval after installation if the modification is recoated prior to backfill following modification.

The NRC has been receiving alternative requests as a result of circumstances where licensees found it difficult or impracticable to conduct wall thickness examinations at the location of the defect. As such, to eliminate the need for potential proposed alternatives requiring NRC review and authorization, this revised condition will increase regulatory efficiency. Allowing equivalent locations to be used to obtain loss of material rates provides flexibility and reduces burden to the licensees. The NRC estimates that this condition would result in averted alternative requests from industry. The NRC analysis estimates that the recordkeeping and reporting cost associated with preparation and submission of 3 alternative requests, or 690 hours per year will be averted with the implementation of this condition.

- Section XI Condition: Pressure Testing of Class 1, 2, and 3 Mechanical Joints. The NRC is amending paragraph (b)(2)(xxvi) to remove references to Section XI pressure test and VT-2 examination. The NRC is relaxing the requirement to perform an ASME Section XI pressure test and VT-2 examination of mechanical joints disassembled and reassembled during the course of repair/replacement activities and instead require that licensee defined leak test be performed to demonstrate the leak

tightness of Class 1, 2, and 3 mechanical joints. The NRC estimates that this condition will result in averted alternative requests from industry. The NRC expects that the modification of this condition will result in approximately 1 averted alternative request from industry, per year. The NRC analysis estimates that the recordkeeping and reporting cost associated with relief requests of 230 hours per year will be averted with the implementation of this condition.

- Section XI Condition: Nonmandatory Appendix R. The NRC is amending paragraph (b)(2)(xxix) to allow the use of Supplement 2 of Nonmandatory Appendix R of Section XI in the 2017 and 2019 Editions without submittal of an alternative in accordance with § 50.55a(z). Currently, § 50.55a(b)(2)(xxix) requires licensees who desire to implement a Risk-Informed Inservice Inspection program in accordance with Appendix R to obtain prior authorization of an alternative in accordance with § 50.55a(z). The NRC is amending § 50.55a(b)(2)(xxix) to allow Risk-Informed Inservice Inspection Programs in accordance with Supplement 2 of Appendix R in ASME Section XI editions 2017 and later to be used without submittal of an alternative in accordance with § 50.55a(z). The NRC expects that the modification of this condition will result in approximately 1 averted alternative request from industry, per year. The NRC analysis estimates that the recordkeeping and reporting cost associated with relief requests of 230 hours per year will be averted with the implementation of this condition.
- Section XI Condition: Summary Report Submittal. The NRC is amending paragraph (b)(2)(xxxii) to relax the timeframe for submittal of Summary Reports (pre-2015 Edition) or Owner Activity Reports (2015 Edition and later) for inservice examinations and repair replacement activities. Through the 2017 Edition of ASME BPV Code, Section XI, owners were required to prepare Summary Reports or Owner Activity Reports of preservice examination, inservice examinations, and repair replacement activities within 90 calendar days of the completion of each refueling outage. Consistent with the 2019 Edition of Section XI, the NRC is extending the submittal of these reports to 120 days. This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Section XI Condition: Fracture Toughness of Irradiated Materials. The NRC is amending paragraph (b)(2)(xxxvi) to extend the applicability of the condition through the latest edition of the ASME BPV Code, Section XI incorporated by reference in § 50.55a(a)(1)(ii). This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Section XI Condition: Defect Removal. The NRC is amending paragraph (b)(2)(xxxix) to extend the applicability of the condition through the latest edition of the ASME BPV Code, Section XI incorporated by reference in § 50.55a(a)(1)(ii). This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.
- Section XI Condition: Prohibitions on Use of IWB-3510.4(b). The NRC is removing § 50.55a(b)(2)(xi) to allow use of Subparagraphs IWB-3510.4(b)(4), IWB-3510.4(b)(5), IWC-3510.5(b)(4), and IWC-3510(b)(5), and Table A-4200-1, Table G-2110-1, Figure A-4200-1, and Figure G-220-1 as it relates to the toughness of certain ferritic steels with specified minimum yield strength greater than 50 ksi. The removal of this condition will extend the applicability of the ASME BPV Code, Section XI procedures to

certain ferritic steels and will provide more flexibility to licensees in the choice of ferritic materials when applying acceptance standards in Paragraph IWB-3500. Therefore, there is no additional recordkeeping or reporting burden associated with this condition.

- Section XI Condition: Regulatory Submittal Requirements. The NRC is adding § 50.55a(b)(2)(xlili) to require licensees to submit certain analyses for NRC review. In the 2019 Edition of the Code, ASME elected to remove a number of submittal requirements related to flaw evaluation. The NRC reviewed each of the subparagraphs where such requirements were removed and determined that three of those removed submittal requirements were necessary to allow the NRC to review plant safety with respect to violation of pressure-temperature limits, ductile-to-brittle transition behavior of ferritic steels, and the effects of radiation embrittlement. Therefore, this new condition is an administrative change that will relocate the submittal provision from the ASME Section XI to § 50.55a(b)(2)(xlili). As such, there is no change in recordkeeping or reporting burden associated with this condition.
- Removal of 2011 Addenda and 2015 Edition of the ASME OM Code. The NRC is removing incorporation by reference of the 2011 Addenda of the ASME OM Code in § 50.55a(a)(1)(iv)(B)(2). The NRC has determined that the incorporation by reference of the 2011 Addenda of the ASME OM Code into § 50.55a is not necessary because there are no licensees and applicants currently implementing the 2011 Addenda of the ASME OM Code. The removal of the 2011 Addenda will allow the NRC to remove the condition on its use specified in § 50.55a(b)(3)(vii) and § 50.55a(b)(3)(xi), as well as the reference to the 2011 Addenda in § 50.55a(b)(3)(ix). For similar reasons, the NRC is removing the incorporation by reference of the 2015 Edition of the ASME OM Code from § 50.55a(a)(1)(iv)(C)(2). The removal of the 2015 Edition will allow the NRC to remove the reference to the 2015 Edition in § 50.55a(b)(3)(iv) and replace it with the reference to the 2012 Edition and remove the reference in § 50.55a(b)(3)(ix). The removal of incorporation by reference of the 2011 Addenda and the 2015 Edition of the ASME OM Code and the corresponding changes to affected conditions will result in no incremental change in recordkeeping or reporting burden, since they are not in use by licensees and applicants.
- OM Condition: New Reactors. The NRC is simplifying § 50.55a(b)(3)(iii) by revising the applicability date to read “April 17, 2018” instead of “the date 12 months after April 17, 2017.” This editorial correction does not change the applicability date of the condition. As such, there is no change in recordkeeping or reporting burden associated with this condition.
- OM Condition: Subsection ISTE. The current regulations § 50.55a(b)(3)(viii) specify that licensees may not implement the risk-informed approach for IST of pumps and valves specified in Subsection ISTE, “Risk-Informed Inservice Testing of Components in Light-Water Reactor Nuclear Power Plants,” in the ASME OM Code, 2009 Edition through the latest edition and addenda of the ASME Code incorporated by reference in § 50.55a(a)(1)(iv), without first obtaining NRC authorization. The NRC found that in the 2020 Edition of the ASME OM Code, Subsection ISTE was revised to be acceptable, and therefore, the NRC is amending § 50.55a(b)(3)(viii) not to extend this condition to the 2020 Edition of the ASME OM Code into § 50.55a. This modified condition is a continuation of an existing requirement and therefore results in no change in recordkeeping or reporting burden.

- OM Condition: Valve Position Indication. The NRC is amending § 50.55a(b)(3)(xi) to allow licensees to extend the position indication testing interval for valves not susceptible to stem-disk separation by allowing licensees to use ASME OM Code Case OMN-28, “Alternative Valve Position Verification Approach to Satisfy ISTC-3700 for Valves Not Susceptible to Stem-Disk Separation.” Licensees may perform the valve position indication tests at 12-year intervals rather than at 12-year intervals specified by paragraph ISTC-3700 “Position Verification Testing” if they have documentation on-site that demonstrates that the stem-disk connection for the specific valves is not susceptible to separation. The NRC analysis determined that while there may be a small increase in the recordkeeping burden for licensees associated with preparing and maintaining the required documentation, this increased burden will be offset by the reduction in burden associated with less frequent testing, and therefore, a reduction in the number of hours required to complete testing documentation. Therefore, there is no significant change in recordkeeping or reporting burden associated with the proposed modification to this condition.
- Inservice Testing Standards Requirement for Operating Plants. The NRC is modifying § 50.55a(f)(4) to clarify the relationship between § 50.55a(f)(4) and (g)(4) regarding the IST or ISI programs for dynamic restraints (snubbers). Specifically, the NRC is including provisions in this paragraph that for dynamic restraints (snubbers), inservice examination, testing, and service life monitoring must meet the inservice examination and testing requirements in the applicable ASME OM Code or ASME BPV Code, Section XI, as specified in § 50.55a(b)(3)(v)(A) and (B). This change to § 50.55a(f)(4), coupled with the proposed change to § 50.55a(g)(4) described below, clarifies the applicability of the inservice examination, testing, and service life monitoring requirements for dynamic restraints (snubbers) with either the ASME OM Code or ASME BPV Code, Section XI. This revision is a clarification of existing requirements and therefore, there is no change in recordkeeping or reporting burden associated with this condition.
- Inservice Testing Reporting Requirements. The NRC is adding § 50.55a(f)(7) to require nuclear power plant applicants and licensees to submit their IST Plans related to pumps and valves, and IST Plans related to snubber examination and testing, to the NRC. The ASME OM Code editions prior to the 2020 Edition state in paragraph (a) of ISTA-3200, “Administrative Requirements,” that IST Plans shall be filed with the regulatory authorities having jurisdiction at the plant site. However, the ASME has removed this provision from the 2020 Edition of the ASME OM Code. This condition retains a requirement from previous editions of the ASME OM Code. Therefore, there is no change in recordkeeping or reporting burden associated with this condition.
- Inservice Inspection Standards Requirement for Operating Plants. The NRC is modifying § 50.55a(g)(4) to parallel proposed revisions to § 50.55a(f)(4) to clarify the relationship between § 50.55a(f)(4) and § 50.55a(g)(4) regarding the IST and ISI programs for dynamic restraints (snubbers). This change to § 50.55a(g)(4), coupled with the change to § 50.55a(f)(4), clarifies the applicability of the inservice examination, testing, and service life monitoring requirements for dynamic restraints (snubbers) with either the ASME OM Code or ASME BPV Code, Section XI. This revision is a clarification of the relationship between § 50.55a(f)(4) and (g)(4) regarding the IST and

ISI programs for dynamic restraints (snubbers) and, therefore, there is no change in recordkeeping or reporting burden associated with this condition.

Number of Nuclear Power Plants

- Operating reactor units. The NRC staff assumes that Vogtle Electric Generating Plant, Units 3 and 4, will start commercial operation by 2022 and are therefore included in count of operating reactor units. This final rule considers 9 nuclear power reactor units that will be licensed to operate in 2022, and 91 units will be licensed to operate in 2023 and 2024. The NRC staff assumes Diablo Canyon Unit 1 will close in 2024, based on recent licensee announcements.
- Future operating reactor units. As of February 2022, there are six power reactors that have no published construction schedule and hold combined licenses (COLs). These reactors are Enrico Fermi Nuclear Plant, Unit 3; North Anna Power Station, Unit 3; William States Lee III Nuclear Station, Units 1 and 2, and Turkey Point Nuclear Generating, Units 6 and 7. These six units would not be operational within the time horizon of this analysis.

Table 1 below summarizes the number of nuclear power plants affected by this rule during the expected clearance period of 2022-2024. The number of operating reactors used decreases under the assumption that reactors that have ceased operations will not perform the actions of the final rule.

TABLE 1
NUMBER OF NUCLEAR POWER PLANTS

Year	Number of Operating Reactors
2022	92
2023	91
2024	91
Average during the reporting period	91

A. JUSTIFICATION

1. Need For and Practical Utility of the Collection of Information

The ASME BPV and OM Codes provide listings of information required and specific forms to assist in documenting required information. In general, Section III records are needed to provide documentation that construction procedures have been properly implemented. ASME BPV Code, Section XI, and ASME OM Code records are needed to document the plans for and results of inservice inspection and inservice testing programs. The information is generally not collected, but is retained by the licensee to be made available to the NRC in the event of an NRC inspection or audit. ASME BPV and OM Code requirements are incorporated in 10 CFR 50 to avoid the need for writing equivalent NRC requirements.

2. Agency Use of Information

The records are generally historical in nature and provide data on which future activities can be based. The practical utility of the information collection for the NRC is that appropriate records are available for auditing by NRC personnel to determine if ASME BPV Code and OM Code provisions for construction, inservice inspection, repairs, and inservice testing are being properly implemented in accordance with 10 CFR 50.55a of the NRC regulations, or whether specific enforcement actions are necessary.

3. Reduction of Burden Through Information Technology

There are no legal obstacles to reducing the burden associated with this information collection. The NRC encourages respondents to use information technology when it would be beneficial to them. The NRC has issued "[Guidance for Electronic Submissions to the NRC](#)," which provides direction for the electronic transmission and submittal of documents to the NRC. Electronic transmission and submittal of documents can be accomplished via the following avenues: the Electronic Information Exchange process, which is available from the NRC's "[Electronic Submittals](#)" Web page, by Optical Storage Media (e.g. CD-ROM, DVD), by facsimile, or e-mail. It is estimated that approximately 100% of the responses are filed electronically.

4. Effort to Identify Duplication and Use Similar Information

No sources of similar information are available. There is no duplication of requirements. The NRC has in place an ongoing program to examine all information collections with the goal of eliminating all duplication and unnecessary information collections.

5. Effort to Reduce Small Business Burden

The provisions of this final rule do not affect small businesses.

6. Consequences to Federal Program or Policy Activities if the Collection Is Not Conducted or Is Conducted Less Frequently

If the information is not collected, NRC will not be in a position to assess whether licensees are operating within the specific safety requirements applicable to the design, construction, test, repair and inspection of nuclear power plant components. The information and required frequency from licensees is essential to NRC's determination that such safety requirements are met throughout the life of the license in order to protect public health and safety. If the information is not collected, or collected less frequently, the NRC could be unaware for an extended period of time that the design, construction, test, repair and inspection of a nuclear power plant's components is no longer adequate to protect the health and safety of the public and the environment.

7. Circumstances Which Justify Variation from OMB Guidelines

ASME BPV Code, Section XI, and ASME OM Code requirements for ISI and IST programs, and 10 CFR 50.55a specify that records and reports must be maintained for the service lifetime of the component or system. Such lifetime retention of the records is necessary to ensure adequate historical information of the design, examination, and testing of components and systems to provide a basis for evaluating degradation of these components and systems at any time during their service lifetime.

8. Consultations Outside the NRC

Opportunity for public comment on the information collection requirements was published in the *Federal Register* on March 26, 2021 (86 FR 16087). The NRC received 74 comments from 8 separate commenters during the public comment period. A full summary of comments and responses related to information collections has been included as Supplement 1, "NRC Responses to Public Comments: Final Rule: American Society of Mechanical Engineers 2019-2020 Code Editions."

NRC's response to public comments did not affect the recordkeeping and reporting burden.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of Information

Confidential and proprietary information is protected in accordance with NRC regulations at 10 CFR 9.17(a) and 10 CFR 2.390(b). However, no information normally considered confidential or proprietary is requested.

11. Justification for Sensitive Questions

This regulation does not request sensitive information.

12. Estimate of Annualized Burden and Burden Hour Cost

A review of past submittals of Code alternative requests has determined that plant owners and COL holders submit Code alternative requests that cover multiple units and multiple plant sites. Under the final rule, a licensee of a nuclear power plant will need to submit a fewer number of the aforementioned Code alternative requests under 10 CFR 50.55a(z), which will provide a net benefit (i.e., averted cost) to the licensee. The estimated burden to prepare and submit an alternative request to the NRC for authorization is 230 hours.

The staff analyzed alternative request submittals across multiple years and based on an assumption that the final rule would become effective in 2022, determined that, the implementation of the final rule will result in the industry's avoidance of an estimated 22 Code alternative submittals (and their associated preparation) each

year under 10 CFR 50.55a(z). During the clearance period, there is an average of 91 potential respondents to the information collection. The burden estimated in this supporting statement reflects just those portions of the implementation costs estimated to occur in the 3-year clearance period.

The burden estimate for the industry is shown in Tables 2 and 3. The burden estimates are based on the average number of respondents during the first three years of the collection, according to the expected implementation of the requirements. These costs are undiscounted for the purpose of this document, and the annual fee rate of \$288 is used for all costs. Each request for alternatives is estimated to take 230 hours; therefore, the resulting reduction in licensee burden is 5,060 hours (22 requests x 230 hours per request), a savings to the licensee of \$1,457,280 (5,060 hours x \$288/hour), and 22 responses annually. There is a decrease in annualized recordkeeping burden due to the reduction in alternative requests. The annualized recordkeeping burden is estimated to decrease by 220 hours (\$63,360).

The \$288 hourly rate used in the burden estimates is based on the Nuclear Regulatory Commission's fee for hourly rates as noted in 10 CFR 170.20 "Average cost per professional staff-hour." For more information on the basis of this rate, see the Revision of Fee Schedules; Fee Recovery for Fiscal Year 2021 (86 FR 32146; June 16, 2021).

13. Estimate of Other Additional Costs

NRC has determined that the records storage cost is roughly proportional to the recordkeeping burden cost. Based on a typical clearance, the recordkeeping storage cost has been estimated to be equal to 0.04 percent of the recordkeeping burden. Therefore, the additional recordkeeping storage savings for 10 CFR Part 50 is estimated to be \$25.34 (220 recordkeeping hours x \$288 x 0.0004).

14. Estimated Annualized Cost to the Federal Government

The staff has developed estimates of annualized costs to the Federal Government related to the conduct of this collection of information. These estimates are based on staff experience and subject matter expertise and include the burden needed to review, analyze, and process the collected information and any relevant operational expenses.

As a result of the implementation of this final rule, the NRC will avert burden from review and approval of 22 Code alternative requests per year. The NRC estimates that reviewing these requests takes an average of 115 hours per request. As a result, the NRC estimates that the incorporation by reference of the 2019 Edition of the ASME BPV Code and the 2020 Edition of the ASME OM Code will result in a savings of \$728,640 (115 hours/alternative request x 22 requests x \$288/hours). Table 4 of this supporting statement shows the burden estimate.

The current annualized cost to the Federal Government for 10 CFR Part 50, "Domestic licensing of production and utilization facilities," is \$66,241,296. The total annualized cost to the government for 10 CFR Part 50 will be \$66,241,296 - \$728,640 = \$65,512,656.

15. Reasons for Change in Burden or Cost

The final rule will decrease the burden for 10 CFR Part 50 from 3,641,926 hours and 42,218 responses to 3,636,646 hours and 42,196 responses, a reduction of 5,280 hours and 22 responses. This will result in an estimated reduction of 240 hours per response.

The final rule incorporates by reference OM and BPV Codes from ASME as described above, which reduces the burden on industry and the NRC by a reduction in alternative requests submitted and reviewed as a result of aspects of plant operation covered by these codes. A recent review of Code alternative requests submitted to the NRC over the last 5-year span found that submittals ranged from a few pages to several hundred pages, with an average of approximately 32 pages. However, the burden hours have been reduced as requests have become less complex to review over time. Therefore, the NRC estimates that a request requires an average of 150 hours of effort to develop the technical justification and an additional 80 hours to perform research, review, approve, process, and submit the document to the NRC for use of alternatives under 10 CFR 50.55a(z). Therefore, the total for estimated burden is 230 hours per request. In the same manner, the NRC estimates that the total burden to perform the technical review (including resolving technical issues), document the evaluation, and respond to the licensee's request is 115 hours per request.

Following the implementation phase, the industry will see a reduced burden for the aspects of plant operation covered by the codes in the final rule.

16. Publication for Statistical Use

This information will not be published for statistical use.

17. Reason for Not Displaying the Expiration Date

The recordkeeping and reporting requirements for this information collection are associated with regulations and are not submitted on instruments such as forms or surveys. For this reason, there are no data instruments on which to display an OMB expiration date. Further, amending the regulatory text of the CFR to display information that, in an annual publication, could become obsolete would be unduly burdensome and too difficult to keep current.

18. Exceptions to the Certification Statement

None.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Not applicable

TABLE 2
ANNUALIZED RECURRING REPORTING BURDEN

Information Collection Section	Number of Respondents	Number of Responses per Respondent	Number of Responses	Burden Hours per Response	Total Reporting Burden (Hrs.)	Cost @ \$288/hr.
50.55a(z) Averted Code Alternative Requests submitted by power reactor plants	22	-1	-22	230	-5,060	-\$1,457,280

TABLE 3
ANNUALIZED RECURRING RECORDKEEPING BURDEN

Information Collection Section	Number of Recordkeepers	Number of Records per Recordkeeper	Number of Records	Burden Hours per Record	Total Reporting Burden (Hrs.)	Cost @ \$288/hr.
10 CFR 50.55a(z) Records for Code Alternative Request preparation and submission	22	-1	-22	10	-220	-\$63,360

Total Industry Burden Hours	-5,280
Total Industry Burden Hour Cost	-\$1,520,640
Annual Potential Respondents	22
Responses	-22

TABLE 4
ANNUALIZED RECURRING NRC REVIEW BURDEN

Information Collection Section	Number of Respondents	Number of Responses per Respondent	Number of Responses	Burden Hours per Response	Total Reporting Burden (Hrs.)	Cost @ \$288/hr.
10 CFR 50.55a(z) Averted reviews of Code Alternative Requests	22	-1	-22	115	-2,530	-\$728,640

Total NRC Burden Hours -2,530
Total NRC Burden Hour Cost -\$728,640