U.S. NUCLEAR REGULATORY COMMISSION

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Proposed Revision 6 to Regulatory Guide 1.192

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OPERATION AND MAINTENANCE CODE CASE ACCEPTABILITY, ASME OM CODE

A. INTRODUCTION

Purpose

This regulatory guide (RG) lists the American Society of Mechanical Engineers (ASME) Operation and Maintenance of Nuclear Power Plants (OM Code), Division 1, Section IST (Ref. 1), code cases that the U.S. Nuclear Regulatory Commission (NRC) has approved for use as voluntary alternatives to the mandatory ASME OM Code provisions that are incorporated by reference into Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities" (Ref. 2). The editions and addenda of the ASME OM Code have had different titles from 2005 to 2022 and are referred to as the OM Code collectively in this RG.

Applicability

This RG applies to reactor licensees and applicants subject to Title 10 of the *Code of Federal* Regulations (10 CFR) 50.55a, "Codes and standards."

Applicable Regulations

- General Design Criterion (GDC) 1, "Quality Standards and Records," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 requires, in part, that structures, systems, and components important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety function to be performed. Where generally recognized codes and standards are used, GDC 1 requires that they be identified and evaluated to determine their applicability, adequacy, and sufficiency and be supplemented or modified as necessary to ensure a quality product in keeping with the required safety function.

- 10 CFR Part 50, Appendix A, GDC 30, "Quality of Reactor Coolant Pressure Boundary," requires, in part, that components that are part of the reactor coolant pressure boundary be designed, fabricated, erected, and tested to the highest quality standards practical.

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 website, http://www.regulations.gov, by searching for draft regulatory guide DG-1448. Alternatively, comments may be submitted to Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications 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 website 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. ML25083A254. The regulatory analysis is associated with a rulemaking and may be found in ADAMS under Accession No. ML25182A128.

- 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants," requires, in part, that measures be established for the control of special processing of materials and that proper testing be performed.

- 10 CFR 50.55a(f) requires, in part, that Class 1, 2, and 3 components and their supports meet the requirements of the ASME OM Code.

- 10 CFR 52.79(a)(11) (Ref. 3) requires the final safety analysis report to include a description of the program(s), and their implementation, necessary to ensure that the systems and components meet the requirements of the ASME Boiler and Pressure Vessel (BPV) Code and the ASME OM Code in accordance with 10 CFR 50.55a.

Related Guidance

- RG 1.84, "Design, Fabrication, and Materials Code Case Acceptability, ASME Section III" (Ref. 4), lists the ASME BPV Code, Section III, "Rules for Construction of Nuclear Power Plant Components," code cases that the NRC has approved for use as voluntary alternatives to the mandatory ASME BPV Code provisions that are incorporated in 10 CFR 50.55a.

- RG 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1" (Ref. 5), lists the ASME BPV Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," code cases that the NRC has approved for use as voluntary alternatives to the mandatory ASME BPV Code provisions that are incorporated in 10 CFR 50.55a.

- RG 1.193, "ASME Code Cases Not Approved for Use" (Ref. 6), lists the ASME BPV Code Section III and Section XI code cases, and the ASME OM code cases, that the NRC has not approved for generic use.

- RG 1.262, "ASME Code Cases Approved for Use Without Conditions" (Ref. 7), lists the ASME code cases that the NRC has determined to be acceptable for use without conditions.

Purpose of This Regulatory Guide

The NRC incorporated this RG into 10 CFR 50.55a by reference. The RG contains new OM code cases and revisions to existing OM code cases that the staff has approved for use, as listed in tables 1 and 2 of this guide. The RG also states the requirements governing the use of OM code cases. Applicants and licensees may voluntarily use OM code cases approved by the NRC as an alternative to compliance with the ASME OM code provisions that have been incorporated by reference into 10 CFR 50.55a. Because the status of OM code cases continually changes, the staff plans to periodically update 10 CFR 50.55a and this guide to accommodate new OM code cases and any revisions to existing OM code cases.

Paperwork Reduction Act

This RG provides voluntary guidance for implementing the mandatory information collections in 10 CFR Parts 50, 50.55a, 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), under control numbers 3150-0011, 3150-0264, and 3150-0151, respectively. Send comments regarding this information collection to the FOIA, Library, and Information Collections

Branch, Mail Stop: T6-A10M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to Infocollects.Resource@nrc.gov, and to the OMB reviewer at: OMB Office of Information and Regulatory Affairs (3150-0011, 3150-0264, and 3150-0151), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street, NW, Washington, DC 20503.

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

Reason for Revision

RG 1.192, Revision 6, includes new information reviewed by the NRC on OM code cases listed in the 2022 Edition of the OM Code and on the ASME Codes & Standards (C&S) Connect website. This revision updates and supersedes RG 1.192, Revision 5, which included information from the 2020 Edition of the OM Code.

In previous rulemakings for ASME code cases, the NRC incorporated by reference revisions of three RGs (RG 1.84, 1.147, and 1.192) identifying ASME code cases that the NRC finds acceptable or conditionally acceptable for use. The NRC has also incorporated by reference RG 1.262, which identifies ASME code cases that the NRC has determined to be unconditionally acceptable for use. RG 1.262 supplements this RG by providing additional code cases that are acceptable for use. The NRC will also continue to update and incorporate by reference these four RGs on a recurring basis.

Background

Provisions of the ASME BPV Code have been used since 1971 as one part of the framework to establish the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety. Among other things, ASME standards committees develop improved methods for the construction, inservice inspection, and inservice testing (IST) of ASME Class 1, 2, 3, metal containment (MC), and concrete containment (CC) nuclear power plant components. A broad spectrum of stakeholders participates in the ASME process to help ensure consideration of the various interests.

In 1990, ASME published the initial edition of the OM Code that provides rules for IST and inservice examination of pumps, valves, and dynamic restraints (snubbers). The ASME Committee on Operation and Maintenance of Nuclear Power Plants maintains the OM Code, which it developed in response to the ASME Board on Nuclear Codes and Standards directive. The directive transferred responsibility for development and maintenance of rules for the IST and inservice examination of pumps, valves, and dynamic restraints (snubbers) from the ASME Section XI Subcommittee on Nuclear Inservice Inspection to the ASME OM Committee on Operation and Maintenance of Nuclear Power Plants. ASME intended the OM Code to replace ASME BPV Code, Section XI, rules for IST and inservice examination of pumps, valves, and dynamic restraints (snubbers), and the Section XI rules for IST and inservice examination of these components that had been incorporated by reference into NRC regulations have been deleted from Section XI. The NRC endorsed the OM Code for the first time in an amendment to 10 CFR 50.55a (Volume 64 of the *Federal Register*, page 51370 (64 FR 51370), September 22, 1999). The NRC endorsed OM code cases through this guide for the first time in June 2003. Beginning with the 2009 Edition, ASME changed the title of the OM Code to "Operation and Maintenance of Nuclear Power Plants."

ASME periodically publishes a new edition of the OM Code. The latest editions and addenda of the OM Code that the NRC has approved for use are referenced in 10 CFR 50.55a(a)(1)(iv). ASME also periodically publishes OM code cases, which provide alternatives that ASME developed and approved to existing OM Code requirements. This RG identifies OM code cases that the NRC has determined to be acceptable alternatives to applicable parts of the OM Code. Applicants or licensees may use these OM code cases without requesting authorization from the NRC, provided that they are used with any identified limitations or modifications. Under 10 CFR 50.55a(z), a licensee or applicant may request authorization to use OM code cases that the NRC has not yet endorsed. That section permits the use of alternatives to the OM Code requirements referenced in 10 CFR 50.55a, provided (1) the proposed

alternatives result in an acceptable level of quality and safety, or (2) the current code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, and their use is authorized by the Director of the Office of Nuclear Reactor Regulation.

The OM Code is incorporated by reference into 10 CFR 50.55a. The regulation at 10 CFR 50.55a(b)(6) states the requirements governing the use of OM code cases. Because of continuing change in the status of OM code cases, the NRC staff plans periodic updates to 10 CFR 50.55a and to this guide to accommodate new OM code cases and revisions of existing OM code cases. OM code cases that the NRC approves in RG 1.192 or RG 1.262 provide an acceptable voluntary alternative to the mandatory OM Code provisions.

When an applicant or licensee initially implements an OM code case, 10 CFR 50.55a requires implementation of the most recent version of that code case as listed in tables 1 and 2. If an applicant or licensee implements an OM code case and a later version of the code case is incorporated by reference into 10 CFR 50.55a and listed in tables 1 and 2 during the licensee's present IST program interval, that licensee may use either the later version or the previous version. An exception to this provision would be the inclusion of a condition on the use of the OM code case that is necessary, for example, to enhance safety. Licensees that choose to continue use of the OM code case during the subsequent IST program interval will be required to implement the latest version incorporated by reference into 10 CFR 50.55a and listed in tables 1 and 2.

ASME may annul OM code cases because the provisions have been incorporated into the OM Code, the application for which it was specifically developed no longer exists, or experience has shown that an examination or testing method is no longer adequate. After ASME annuls an OM code case and after the NRC amends 10 CFR 50.55a and this guide, applicants or licensees may not implement that OM code case for the first time. However, an applicant or licensee that implemented the OM code case before its annulment may continue to use that code case through the end of the present IST interval. An annulled OM code case cannot be used in the subsequent IST interval unless implemented as an approved alternative under 10 CFR 50.55a(z). If the NRC incorporated an OM code case by reference into 10 CFR 50.55a and ASME later annulled it because experience has shown that an examination or testing method is inadequate, the NRC would amend 10 CFR 50.55a and this guide to remove the approval of the annulled code case. Applicants and licensees should not begin to implement such annulled OM code cases in advance of the rulemaking. Notwithstanding these requirements, the Commission may impose new or revised OM Code requirements, including implementation schedules, that it determines are consistent with 10 CFR 50.109, "Backfitting."

ASME may revise an OM code case, for example, to incorporate user experience. The applicant or licensee may not apply the older or superseded version of the OM code case unless it was applied before it was superseded. If an applicant or a licensee applied a code case before it was listed as superseded, it may continue to use the code case until it updates its Construction Code of Record (an applicant would update its application) or until the licensee's IST update interval expires, after which the continued use of the OM code case is prohibited unless the NRC grants approval under 10 CFR 50.55a(z). If the NRC incorporates a code case by reference into 10 CFR 50.55a and if ASME later issues a revised version of the code case because experience has shown that the design analysis, construction method, examination method, or testing method is inadequate, the NRC would amend 10 CFR 50.55a and the relevant RG to remove its approval of the superseded OM code case. Applicants and licensees should not begin to implement such superseded OM code cases in advance of the rulemaking.

With regard to the use of any OM code case, the user is responsible for ensuring that the provisions of the OM code case do not conflict with licensee commitments or other regulatory requirements.

C. REGULATORY POSITION

For RG 1.192, Revision 6, the NRC reviewed the OM code cases listed in an applicability index on the ASME C&S Connect website. RG 1.192, Revision 6, supersedes the information in Revision 5. ASME prepared the OM Code Case Applicability Index to specify the applicability of each OM code case because some new code cases do not include a paragraph specifying the editions and addenda of the ASME OM Code to which they are applicable. The NRC staff reviewed the OM Code Case Applicability Index dated August 1, 2025 (Agencywide Documents Access and Management System Accession No. ML25349A093) as part of this revision to RG 1.192. Any conditions related to use of the OM Code Case Applicability Index for specific OM code cases are indicated in this revision to RG 1.192 in the applicable table. The tables in this RG refer to the 2022 Edition; however, the specific applicability of each code case is provided in the OM Code Case Applicability Index with any conditions specified in this revision to RG 1.192.

Appendix A to this guide gives a complete list of all OM code cases published by ASME. The table in appendix A lists the action ASME has taken (e.g., new or revised OM code case), the edition or addenda in which the OM code case was published, and the table in the RG that lists each OM code case. The following four tables list the OM code cases addressed by this RG:

a. Table 1, "Acceptable OM Code Cases," contains the OM code cases that are acceptable to the NRC for implementation in the IST of light-water-cooled nuclear power plants.

b. Table 2, "Conditionally Acceptable OM Code Cases," contains the OM code cases that are acceptable, provided that they are used with the identified conditions (i.e., the OM code case is generally acceptable, but the NRC has determined that the requirements in the code case, which are alternative requirements to the OM Code, must be supplemented to provide an acceptable level of quality and safety).

c. Table 3, "OM Code Cases That Have Been Superseded by Revised OM Code Cases," contains OM code cases that have been superseded through revision.

d. Table 4, "Annulled OM Code Cases," contains the OM code cases that ASME annulled.

1. Acceptable OM Code Cases

The OM code cases listed in table 1 are acceptable to the NRC for implementation in an applicant's or licensee's IST programs. The ASME OM Code uses two approaches to list revisions of OM code cases. The first approach lists OM code cases according to edition or addenda (e.g., OMN-6, 2020 Edition). The second approach uses a numbering system (e.g., OMN-1, Revision 1) that states the latest revision number of a code case. Thus, the tables below show either the latest edition or addenda in which an OM code case was published or the latest revision number of an OM code case, in accordance with the requirement in 10 CFR 50.55a that licensees or applicants implement the most recent version of an OM code case. The edition and addenda are listed in addition to the revision number because the OM Code in some cases reaffirms OM code cases with minor changes. Listing both the revision number and edition or addenda ensures that the latest version of the OM code case is implemented. To assist users, new and revised OM code cases are shaded in grey to distinguish them from those approved in previous versions of this guide.

Table 1. Acceptable OM Code Cases

CODE CASE NUMBER	TABLE 1 ACCEPTABLE OM CODE CASES
OMN-6 (2022 Edition)	*Alternate Rules for Digital Instruments*
OMN-7 (2022 Edition)	*Alternative Requirements for Pump Testing*
OMN-8 (2022 Edition)	*Alternative Rules for Preservice and Inservice Testing of Power-Operated Valves That Are Used for System Control and Have a Safety Function per OM-10, ISTC-1.1, or ISTA-1100*
OMN-13, Revision 3 & 4 (2020 Edition)	*Performance-Based Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants*
OMN-15, Revision 4 (2022 Edition)	*Performance-Based Requirements for Extending the Snubber Operational Readiness Testing Interval at LWR Power Plants*
OMN-16, Revision 2 (2022 Edition)	*Use of a Pump Curve for Testing*
OMN-17, Revision 1 (2022 Edition)	*Alternative Requirements for Testing ASME Class 1 Pressure Relief/Safety Valves*
OMN-18 (2022 Edition)	*Alternate Testing Requirements for Pumps Tested Quarterly Within ±20% of Design Flow*
OMN-21 (2022 Edition)	*Alternative Requirements for Adjusting Hydraulic Parameters to Specified Reference Points*
OMN-22 (2020 Edition)	*Smooth Running Pumps*
OMN-24 (2022 Edition)	*Alternative Requirements for Testing ASME Class 2 and 3 Pressure Relief Valves (For Relief Valves in a Group of One)*
OMN-25 (2022 Edition)	*Alternative Requirements for Testing Appendix I Pressure Relief Valves*
OMN-26 (2022 Edition)	*Alternate Risk-Informed and Margin Based Rules for Inservice Testing of Motor Operated Valves*

CODE CASE NUMBER	TABLE 1 ACCEPTABLE OM CODE CASES
OMN-27 (2022 Edition)	*Alternative Requirements for Testing Category A Valves (Non-PIV/CIV)*
OMN-28 (2022 Edition)	*Alternative Valve Position Verification Approach to Satisfy ISTC-3700 for Valves Not Susceptible to Stem-Disk Separation*
OMN-29 (2022 Edition)	*Pump Condition Monitoring Program*
OMN-30 (2022 Edition)	*Alternative Valve Position Verification Approach to Satisfy ISTC-3700*
OMN-32 Revision 1 (2022 Edition)	*Alternative Requirements for Range and Accuracy of Pressure, Flow, and Differential Pressure Instruments Used in Pump Tests*
OMN-34 (2022 Edition)	*Use of a Pump Curve for Testing*

2. Conditionally Acceptable OM Code Cases

The OM code cases listed in table 2 are acceptable to the NRC for implementation in an applicant's or licensee's IST programs with the conditions indicated by the agency. The OM Code uses two approaches to list revisions of OM code cases. The first approach lists OM code cases according to edition or addenda (e.g., OMN-6, 2020 Edition). The second approach uses a numbering system (e.g., OMN-1, Revision 1) that states the latest revision number of a code case. Thus, the tables below show either the latest edition or addenda in which an OM code case was published or the latest revision number of an OM code case, in accordance with the requirement in 10 CFR 50.55a that licensees or applicants implement the most recent version of an OM code case. The edition and addenda are listed in addition to the revision number because the OM Code in some cases reaffirms OM code cases with minor changes. Listing both the revision number and edition or addenda ensures that the latest version of the OM code case is implemented. To assist users, new and revised OM code cases are shaded in grey to distinguish them from those approved in previous versions of this guide. In table 2, where an OM code case is specified as acceptable for application at nuclear power plants with a Code of Record of any edition or addenda of the OM Code incorporated by reference in 10 CFR 50.55a(a)(1)(iv), applicants and licensees should verify that the OM code case is applied to the proper paragraphs in the OM Code edition or addenda specified as the Code of Record for the specific nuclear power plant, because paragraphs might be renumbered in newer editions or addenda of the OM Code.

Table 2. Conditionally Acceptable OM Code Cases

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE OM CODE CASES TITLE/CONDITION
OMN-1 Revision 2 (2022 Edition)	*Alternative Rules for Preservice and Inservice Testing of Active Electric Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants* Applicants and licensees may use this OM Code Case in lieu of the provisions for stroke time testing in Subsection ISTC of the 1995 Edition up to and including the 2012 Edition of the OM Code when applied in conjunction with the provisions for leakage rate testing in, as applicable, ISTC 4.3 (1995 Edition with the 1996 and 1997 Addenda) and ISTC-3600 (1998 Edition through the 2012 Edition). In addition, applicants and licensees who continue to implement Section XI of the ASME BPV Code as their Code of Record may use OMN-1 in lieu of the provisions for stroke-time testing specified in Paragraph 4.2.1 of ASME/ANSI OM Part 10 as required by 10 CFR 50.55a(b)(2)(vii) subject to the conditions in this RG. Applicants and licensees who choose to apply OMN-1 must apply all its provisions. (1) The adequacy of the diagnostic test interval for each motor-operated valve (MOV) must be evaluated and adjusted as necessary, but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of OMN-1. (2) When extending exercise test intervals for high risk MOVs beyond a quarterly frequency, applicants or licensees must ensure that the potential increase in core damage frequency (CDF) and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement. (3) When applying risk insights as part of the implementation of OMN-1, applicants or licensees must categorize MOVs according to their safety significance using the methodology described in OM Code Case OMN-3, "Requirements for Safety Significance Categorization of Components Using Risk Insights for Inservice Testing of LWR Power Plants," with the conditions discussed in this RG, or using other MOV risk ranking methodologies accepted by the NRC on a plant-specific or industrywide basis with the conditions in the applicable safety evaluations.

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE OM CODE CASES TITLE/CONDITION
	Note 1: As indicated at 64 FR 51370–51386, applicants and licensees are cautioned that, when implementing OMN-1, the benefits of performing a particular test should be balanced against the potential adverse effects placed on the valves or systems caused by this testing. Note 2: These conditions are identical to those imposed on OMN-1, Revision 1 (2017 Edition), in Revision 3 to RG 1.192.
OMN-3 (2022 Edition)	*Requirements for Safety Significance Categorization of Components Using Risk Insights for Inservice Testing of LWR Power Plants* (1) In addition to those components identified in the ASME IST Program Plan, implementation of Section 1, "Applicability," of the OM code case must include within the scope of an applicant's or licensee's risk-informed IST program, non-OM code case components categorized as high safety-significant components (HSSCs) that might not currently be included in the IST Program Plan. (2) The decision criteria discussed in Section 4.4.1, "Decision Criteria," of the OM code case for evaluating the acceptability of aggregate risk effects (i.e., for CDF and large early release frequency) must be consistent with the guidance provided in RG 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis" (Ref. 8). (3) Section 4.4.4, "Defense in Depth," of the OM code case must be consistent with the guidance contained in Sections 2.2.1, "Defense-in-Depth Evaluation," and 2.2.2, "Safety Margin Evaluation," of RG 1.175, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing" (Ref. 9). (4) Implementation of Section 4.5, "Inservice Testing Program," and Section 4.6, "Performance Monitoring," of the OM code case must be consistent with the guidance pertaining to IST of pumps and valves provided in Section 3.2, "Program Implementation," and Section 3.3, "Performance Monitoring," of RG 1.175. Testing and performance monitoring of individual components must be performed as specified in the risk-informed components OM code cases (e.g., OMN-1, OMN-4, OMN-7, and OMN-12, as modified by the conditions discussed in this RG). (5) Implementation of Section 3.2, "Plant Specific PRA," of the OM code case must be consistent with the guidance that the owner is responsible for demonstrating and justifying the technical adequacy of the probabilistic risk assessment (PRA) analyses used as the basis to perform component risk ranking and for estimating the aggregate risk impact. RG 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities" (Ref. 10), provides guidance for determining the technical adequacy of the PRA used in a risk-informed regulatory activity. RG 1.201, "Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants According to Their Safety Significance" (Ref. 11), describes one acceptable method to categorize the safety significance of an active component, including methods to use when a plant-specific PRA that meets the appropriate RG 1.200 capability for specific hazard group(s) (e.g., seismic and fire) is not available. (6) Section 4.2.4, "Reconciliation," Paragraph (b), is not endorsed. The expert panel may not classify components that are ranked HSSC by the results of a qualitative or quantitative PRA evaluation (excluding the sensitivity studies) or the defense-in-depth assessment as a low safety significant component (LSSC).

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE OM CODE CASES TITLE/CONDITION
OMN-3 (2022 Edition) (cont'd)	(7) Implementation of Section 3.3, "Living PRA," must be consistent with the following: (1) To account for potential changes in failure rates and other changes that could affect the PRA, changes to the plant must be reviewed, and, as appropriate, the PRA updated. (2) When the PRA is updated, the categorization of structures, systems, and components must be reviewed and changed if necessary to remain consistent with the categorization process. (3) The review of plant changes must be performed in a timely manner and must be performed once every two refueling outages or as required by 10 CFR 50.71(h)(2) for combined license holders. Note 1: The OM code case methodology for risk ranking uses two categories of safety significance. The NRC staff has determined that this is acceptable for ranking all component types. However, the NRC staff has accepted other methodologies for risk ranking MOVs, with certain conditions, that use three categories of safety significance. Note 2: These conditions are identical to those imposed on OMN-3 (2017 Edition) in Revision 3 to RG 1.192.
OMN-4 (2022 Edition)	*Requirements for Risk Insights for Inservice Testing of Check Valves at LWR Power Plants* (1) Valve opening and closing functions must be demonstrated when flow testing or examination methods (nonintrusive, or disassembly and inspection) are used. (2) The initial interval for tests and associated examinations may not exceed two fuel cycles or 3 years, whichever is longer; any extension of this interval may not exceed one fuel cycle per extension, with the maximum interval not to exceed 10 years. Trending and evaluation of existing data must be used to reduce or extend the time interval between tests. (3) If the Appendix II condition monitoring program is discontinued, the requirements of ISTC 4.5.1, "Exercising Test Frequency," through ISTC 4.5.4, "Valve Obturator Movement" (1996 and 1997 Addenda), or ISTC 3510, 3520, 3540, and 5221 (1998 Edition through 2012 Edition), as applicable, must be implemented. Note 1: The conditions are identical to those imposed on OMN-4 (2017 Edition) in Revision 3 to RG 1.192. Note 2: The conditions with respect to allowable methodologies for OMN-3 risk ranking specified for the use of OMN-1 also apply to OMN-4.
OMN-9 (2022 Edition)	*Use of a Pump Curve for Testing* (1) When a reference curve may have been affected by repair, replacement, or routine servicing of a pump, a new reference curve must be determined, or an existing reference curve must be reconfirmed, in accordance with Section 3 of this OM code case. (2) If it is necessary or desirable, for some reason other than that stated in Section 4 of this OM code case, to establish an additional reference curve or set of curves, these new curves must be determined in accordance with Section 3. Note 1: The conditions are identical to those imposed on OMN-9 (2017 Edition) in Revision 3 to RG 1.192.
OMN-12 (2022 Edition)	*Alternative Requirements for Inservice Testing Using Risk Insights for Pneumatically and Hydraulically Operated Valve Assemblies in Light-Water Reactor Power Plants (OM-Code 1998, Subsection ISTC)* (1) Paragraph 4.2, "Inservice Test Requirements," of OMN-12 specifies inservice test requirements for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the OM code case. The inservice testing program must include a mix of static and dynamic valve assembly performance testing. The mix of valve assembly performance testing may be altered when justified by an engineering evaluation of test data.

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE OM CODE CASES TITLE/CONDITION
OMN-12 (2022 Edition) (cont'd)	(2) Paragraph 4.2.2.3 of OMN-12 specifies the periodic test requirements for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the code case. The adequacy of the diagnostic test interval for each high safety significant valve assembly must be evaluated and adjusted as necessary, but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of OMN-12. (3) Paragraph 4.2.3, "Periodic Valve Assembly Exercising," of OMN-12 specifies periodic exercising for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the OM code case. Consistent with the requirement in OMN 3 to evaluate the aggregate change in risk associated with changes in test strategies, when extending exercise test intervals for high safety significant valve assemblies beyond a quarterly frequency, the potential increase in CDF and risk associated with the extension must be evaluated and determined to be small and consistent with the intent of the Commission's Safety Goal Policy Statement. (4) Paragraph 4.4.1, "Acceptance Criteria," of OMN-12 specifies that acceptance criteria must be established for the analysis of test data for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the OM code case. When establishing these acceptance criteria, the potential degradation rate and available capability margin for each valve assembly must be evaluated and determined to provide assurance that the valve assemblies are capable of performing their design basis functions until the next scheduled test. (5) Paragraph 5, "Low Safety Significant Valve Assemblies," of OMN-12 specifies that the purpose of its provisions is to provide a high degree of confidence that pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case will perform their intended safety function if called upon. The applicant or licensee must have reasonable confidence that low safety significant valve assemblies remain capable of performing their intended design-basis safety functions until the next scheduled test. The test and evaluation methods may be less rigorous than those applied to high safety significant valve assemblies. (6) Paragraph 5.1, "Set Points and/or Critical Parameters," of OMN-12 specifies requirements and guidance for establishing setpoints and critical parameters of pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case. Setpoints for these valve assemblies must be based on direct dynamic test information, a test based methodology, or grouping with dynamically tested valves, and documented according to Paragraph 5.1.4. The setpoint justification methods may be less rigorous than provided for high risk-significant valve assemblies. (7) Paragraph 5.4, "Evaluations," of OMN-12, specifies evaluations to be performed of pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case. Initial and periodic diagnostic testing must be performed to establish and verify the setpoints of these valve assemblies to ensure that they are capable of performing their design-basis safety functions. Methods for testing and establishing test frequencies may be less rigorous than applied to high risk-significant valve assemblies. (8) Paragraph 5.6, "Corrective Action," of OMN-12 specifies that corrective action must be initiated if the parameters monitored and evaluated for pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case do not meet the established criteria. Further, if the valve assembly does not satisfy its acceptance criteria, the operability of the valve assembly must be evaluated. Note 1: Applicants and licensees are cautioned that, when implementing OMN-12, the benefits of performing a particular test should be balanced against the potential adverse effects placed on the valves or systems caused by this testing.

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE OM CODE CASES TITLE/CONDITION
OMN-12 (2022 Edition) (cont'd)	Note 2: Paragraph 3.1 of OMN-12 states that "Valve assemblies shall be classified as either high safety significant or low safety significant in accordance with Code Case OMN-3." This note as well as Note 2 to OMN-4 have been added to ensure the consistent consideration of risk insights. Note 3: The conditions are identical to those imposed on OMN-12 (2017 Edition) in Revision 3 to RG 1.192.
OMN-19 (2022 Edition)	*Alternative Upper Limit for the Comprehensive Pump Test* Applicants or licensees who use this OM code case must implement a pump periodic verification test program. A pump periodic verification test is defined as a test that verifies a pump can meet the required (differential or discharge) pressure as applicable, at its highest design-basis accident flow rate. The applicant or licensee must do the following: (1) Identify those certain applicable pumps with specific design-basis accident flow rates in the applicant's or licensee's credited safety analysis (e.g., technical specifications, technical requirements program, or updated safety analysis report) for inclusion in this program. (2) Perform the pump periodic verification test at least once every 2 years. (3) Determine whether the pump periodic verification test is required before declaring the pump operable following replacement, repair, or maintenance of the pump. (4) Declare the pump inoperable if the pump periodic verification test flow rate and associated differential pressure (or discharge pressure for positive displacement pumps) cannot be achieved. (5) Maintain the necessary records for the pump periodic verification tests, including the applicable test parameters (e.g., flow rate and associated differential pressure, or flow rate and associated discharge pressure, and speed for variable speed pumps) and their basis. (6) Account for the pump periodic verification test instrument accuracies in the test acceptance criteria. The applicant or licensee need not perform a pump periodic verification test if the design-basis accident flow rate in the applicant's or licensee's safety analysis is bounded by the comprehensive pump test or Group A test. Note 1: The conditions are identical to those imposed on OMN-19 (2017 Edition) in Revision 3 to RG 1.192

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE OM CODE CASES TITLE/CONDITION
OMN-20 (2022 Edition)	*Inservice Test Frequency* This OM code case is applicable to the editions and addenda of the OM Code listed in 10 CFR 50.55a(a)(1)(iv). Although OM Code Case OMN-20 has an applicability statement in its inquiry and reply, the guidance in OM Code Case OMN-20 is acceptable for application at nuclear power plants with a Code of Record of any edition or addenda of the OM Code incorporated by reference in 10 CFR 50.55a(a)(1)(iv). Note 1: The conditions are identical to those imposed on OMN-20 (2017 Edition) in Revision 3 to RG 1.192.
OMN-31 (2022 Edition)	*Alternative to Allow Extension of ISTA-3120 Inservice Examination and Test Intervals From 10 Years to 12 Years* Contrary to the ASME OM Code Case Applicability Index, this OM code case may only be applied by licensees who are implementing the ASME OM Code, 2017 Edition, or later edition, of the ASME OM Code incorporated by reference in 10 CFR 50.55a as the Code of Record for the IST Program at their nuclear power plants. Further, licensees may only begin implementing Code Case OMN-31 at the beginning of an IST interval as specified in ASME OM Code, paragraph ISTA-3120.

3. OM Code Cases Superseded by Revised OM Code Cases

The OM code cases listed in table 3 were approved in prior versions of this guide and have since been superseded by revised OM code cases. The versions of the code cases listed in table 3 cannot be applied by the licensee or applicant for the first time after the effective date of this RG. To assist users, changes to superseded code cases are shaded in grey to distinguish them from those listed in previous versions of this guide.

Table 3. OM Code Cases That Have Been Superseded by Revised OM Code Cases

CODE CASE NUMBER	TABLE 3 OM CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED OM CODE CASES TITLE/CONDITION
OMN-1 (1996 Addenda) (1999 Addenda) (2001 Edition) (2002 Addenda) (2004 Edition) (2006 Addenda) (2009 Edition) (2012 Edition) (2015 Edition) Rev. 1 (2012 Edition) (2015 Edition) Rev. 2 (2017 Edition) (2020 Edition)	*Alternative Rules for Preservice and Inservice Testing of Certain Motor-Operated Valve Assemblies in Light-Water Reactor Power Plants (OM Code-1995, Subsection ISTC)* Licensees may use this OM code case in lieu of the provisions for stroke time testing in Subsection ISTC of the 1995 Edition up to and including the 2000 Addenda of the OM Code when applied in conjunction with the provisions for leakage rate testing in, as applicable, ISTC 4.3 (1995 Edition with the 1996 and 1997 Addenda) and ISTC 3600 (1998 Edition through the 2004 Addenda). In addition, licensees who continue to implement Section XI of the ASME BPV Code as their Code of Record may use OMN-1 in lieu of the provisions for stroke-time testing specified in Paragraph 4.2.1 of ASME/ANSI OM Part 10 as required by 10 CFR 50.55a(b)(2)(vii) subject to the conditions in this RG. Licensees who choose to apply OMN-1 must apply all its provisions. (1) The adequacy of the diagnostic test interval for each MOV must be evaluated and adjusted as necessary, but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of OMN-1. (2) When extending exercise test intervals for high-risk MOVs beyond a quarterly frequency, licensees must ensure that the potential increase in CDF and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement. (3) When applying risk insights as part of the implementation of OMN-1, licensees must categorize MOVs according to their safety significance using the methodology described in OM Code Case OMN-3, with the conditions discussed in this RG, or using other MOV risk-ranking methodologies accepted by the NRC on a plant-specific or industrywide basis with the conditions in the applicable safety evaluations. NOTE: As indicated at 64 FR 51370–51386, licensees are cautioned that, when implementing OMN-1, the benefits of performing a particular test should be balanced against the potential adverse effects placed on the valves or systems caused by this testing.
OMN-2 (1998 Addenda) (2001 Edition) (2004 Edition) (2009 Edition) (2012 Edition)	*Thermal Relief Valve Code Case, OM Code-1995, Appendix I* *(Note: This OM code case was annulled in the 2017 Edition of the OM Code.)*
OMN-3 (1998 Edition) (2001 Edition) (2002 Addenda) (2004 Edition) (2009 Edition) (2012 Edition) (2015 Edition)	*Requirements for Safety Significance Categorization of Components Using Risk Insights for Inservice Testing of LWR Power Plants* (1) In addition to those components identified in the ASME IST Program Plan, implementation of Section 1, "Applicability," of the code case must include within the scope of a licensee's risk-informed IST program non-ASME Code components categorized as high safety significant components (HSSCs) that might not currently be included in the IST Program Plan. (2) The decision criteria discussed in Section 4.4.1, "Decision Criteria," of the code case for

CODE CASE NUMBER	TABLE 3 OM CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED OM CODE CASES TITLE/CONDITION
(2017 Edition) (2020 Edition)	evaluating the acceptability of aggregate risk effects (i.e., for Core Damage Frequency [CDF] and Large Early Release Frequency [LERF]) must be consistent with the guidance provided in Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis." (3) Section 4.4.4, "Defense in Depth," of the code case must be consistent with the guidance contained in Sections 2.2.1, "Defense-in-Depth Evaluation," and 2.2.2, "Safety Margin Evaluation," of Regulatory Guide 1.175, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing." (4) Implementation of Sections 4.5, "Inservice Testing Program," and 4.6, "Performance Monitoring," of the code case must be consistent with the guidance pertaining to inservice testing of pumps and valves provided in Section 3.2, "Program Implementation," and Section 3.3, "Performance Monitoring," of Regulatory Guide 1.175. Testing and performance monitoring of individual components must be performed as specified in the risk-informed components code cases (e.g., OMN-1, OMN-4, OMN-7, and OMN-12, as modified by the conditions discussed in this regulatory guide). Note: The code case methodology for risk ranking uses two categories of safety significance. The NRC staff has determined that this is acceptable for ranking MOVs, air-operated valves (AOVs), and check valves. However, the NRC staff has accepted other methodologies for risk ranking MOVs, with certain conditions, that use three categories of safety significance.
OMN-4 (1999 Addenda) (2001 Edition) (2004 Edition) (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Requirements for Risk Insights for Inservice Testing of Check Valves at LWR Power Plants* (1) Valve opening and closing functions must be demonstrated when flow testing or examination methods (nonintrusive, or disassembly and inspection) are used. (2) The initial interval for tests and associated examinations may not exceed two fuel cycles or 3 years, whichever is longer; any extension of this interval may not exceed one fuel cycle per extension, with the maximum interval not to exceed 10 years. Trending and evaluation of existing data must be used to reduce or extend the time interval between tests. (3) If the Appendix II condition monitoring program is discontinued, the requirements of ISTC 4.5.1, "Exercising Test Frequency," through ISTC 4.5.4, "Valve Obturator Movement" (1996 and 1997 Addenda), or ISTC 3510, 3520, 3540, and 5221 (1998 Edition with the 1999 and 2000 Addenda), as applicable, must be implemented.
OMN-5 (1999 Addenda) (2001 Edition) (2004 Edition) (2006 Addenda) (2009 Edition) (2012 Edition)	*Testing of Liquid Service Relief Valves Without Insulation* *(Note: This OM code case was annulled in the 2017 Edition of the OM Code.)*
OMN-6 (1999 Addenda) (2001 Edition) (2002 Addenda) (2004 Edition) (2006 Addenda) (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition)	*Alternate Rules for Digital Instruments*

CODE CASE NUMBER	TABLE 3 OM CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED OM CODE CASES TITLE/CONDITION
(2020 Edition)	
OMN-7 (2000 Addenda) (2001 Edition) (2002 Addenda) (2004 Edition) (2005 Addenda) (2006 Addenda) (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Alternative Requirements for Pump Testing*
OMN-8 (2000 Addenda) (2001 Edition) (2003 Addenda) (2004 Edition) (2005 Addenda) (2006 Addenda) (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Alternative Rules for Preservice and Inservice Testing of Power-Operated Valves That Are Used for System Control and Have a Safety Function per OM-10, ISTC-1.1, or ISTA-1100*
OMN-9 (2000 Addenda) (2001 Edition) (2003 Addenda) (2004 Edition) (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Use of a Pump Curve for Testing* (1) When a reference curve may have been affected by repair, replacement, or routine servicing of a pump, a new reference curve must be determined, or an existing reference curve must be reconfirmed, in accordance with Section 3 of this OM code case. (2) If it is necessary or desirable, for some reason other than that stated in Section 4 of this OM code case, to establish an additional reference curve or set of curves, these new curves must be determined in accordance with Section 3.
OMN-11 (2001 Edition) (2003 Addenda) (2004 Edition) (2006 Addenda) (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Risk-Informed Testing for Motor-Operated Valves* Where a licensee is implementing OM Code Case OMN-1 as a justified alternative to the requirements for stroke-time testing of MOVs in Subsection ISTC of the OM Code, the licensee may apply risk insights to its MOV program as indicated in Paragraph 3.7, "Risk-Based Criteria for MOV Testing," of OMN-1 and as supplemented by OM Code Case OMN 11 with the following conditions: (1) In addition to the IST provisions of Paragraph 3 of OMN-11, MOVs within the scope of OMN-1 that are categorized as LSSCs must satisfy the other provisions of OMN-1, including determination of proper MOV test intervals as specified in Paragraph 6 of OMN-1. (2) Paragraph 3(a) of OMN-11 must be interpreted as allowing the provisions of Paragraphs 3.5(a) and (d) of OMN-1 related to similarity and test sample, respectively, to be relaxed for the grouping of LSSC MOVs. The provisions of Paragraphs 3.5(b), (c), and (e) of OMN-1, related to evaluation of test results for MOVs in the group, sequential testing of a representative MOV, and analysis of test results in accordance with Paragraph 6 of OMN-1 for each MOV in the group, respectively, continue to be applicable to all MOVs within the scope of OMN-1.

CODE CASE NUMBER	TABLE 3 OM CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED OM CODE CASES TITLE/CONDITION
	(3) When extending exercise test intervals for high-risk MOVs beyond a quarterly frequency, the licensee must ensure that the potential increase in CDF and risk associated with the extension is small and consistent with the intent of the Commission's Safety Goal Policy Statement. Note 1: The condition on allowable methodologies for MOV risk ranking specified for the use of OMN-1 also applies to OMN-11.
OMN-12 (2001 Edition) (2004 Edition) (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Alternative Requirements for Inservice Testing Using Risk Insights for Pneumatically and Hydraulically Operated Valve Assemblies in Light-Water Reactor Power Plants (OM Code 1998, Subsection ISTC)* (1) Paragraph 4.2, "Inservice Test Requirements," of OMN-12 specifies inservice test requirements for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the OM code case. The inservice testing program must include a mix of static and dynamic valve assembly performance testing. The mix of valve assembly performance testing may be altered when justified by an engineering evaluation of test data. (2) Paragraph 4.2.2.3 of OMN-12 specifies the periodic test requirements for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the OM code case. The adequacy of the diagnostic test interval for each high safety significant valve assembly must be evaluated and adjusted as necessary, but not later than 5 years or three refueling outages (whichever is longer) from initial implementation of OMN-12. (3) Paragraph 4.2.3, "Periodic Valve Assembly Exercising," of OMN-12 specifies periodic exercising for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the OM code case. Consistent with the requirement in OMN-3 to evaluate the aggregate change in risk associated with changes in test strategies, when extending exercise test intervals for high safety significant valve assemblies beyond a quarterly frequency, the potential increase in CDF and risk associated with the extension must be evaluated and determined to be small and consistent with the intent of the Commission's Safety Goal Policy Statement. (4) Paragraph 4.4.1, "Acceptance Criteria," of OMN-12 specifies that acceptance criteria must be established for the analysis of test data for pneumatically and hydraulically operated valve assemblies categorized as high safety significant within the scope of the OM code case. When establishing these acceptance criteria, the potential degradation rate and available capability margin for each valve assembly must be evaluated and determined to provide assurance that the valve assemblies are capable of performing their design basis functions until the next scheduled test. (5) Paragraph 5, "Low Safety Significant Valve Assemblies," of OMN-12 specifies that the purpose of its provisions is to provide a high degree of confidence that pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case will perform their intended safety function if called upon. The licensee must have reasonable confidence that low safety significant valve assemblies remain capable of performing their intended design-basis safety functions until the next scheduled test. The test and evaluation methods may be less rigorous than those applied to high safety significant valve assemblies. (6) Paragraph 5.1, "Set Points and/or Critical Parameters," of OMN-12 specifies requirements and guidance for establishing set points and critical parameters of pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case. Setpoints for these valve assemblies must be based on direct dynamic test information, a test based methodology, or grouping with dynamically tested valves, and documented according to Paragraph 5.1.4. The setpoint justification methods may be less rigorous than provided for high risk significant valve assemblies.

CODE CASE NUMBER	TABLE 3 OM CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED OM CODE CASES TITLE/CONDITION
	(7) Paragraph 5.4, "Evaluations," of OMN-12 specifies evaluations to be performed of pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case. Initial and periodic diagnostic testing must be performed to establish and verify the setpoints of these valve assemblies to ensure that they are capable of performing their design-basis safety functions. Methods for testing and establishing test frequencies may be less rigorous than applied to high risk significant valve assemblies. (8) Paragraph 5.6, "Corrective Action," of OMN-12 specifies that corrective action must be initiated if the parameters monitored and evaluated for pneumatically and hydraulically operated valve assemblies categorized as low safety significant within the scope of the OM code case do not meet the established criteria. Further, if the valve assembly does not satisfy its acceptance criteria, the operability of the valve assembly must be evaluated. Note: Licensees are cautioned that, when implementing OMN-12, the benefits of performing a particular test should be balanced against the potential adverse effects placed on the valves or systems caused by this testing.
OMN-13 (2001 Edition) (2004 Edition) (2009 Edition) (2012 Edition)	*Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants*
OMN-13 Revision 1 (2009 Edition) (2012 Edition)	*Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants*
OMN-13 Revision 2 (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Performance-Based Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants*
OMN-13 Revision 3 (2020 Edition)	*Performance-Based Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants*
OMN-14 (2003 Addenda) (2004 Edition) (2009 Edition) (2012 Edition)	*Alternative Rules for Valve Testing Operations and Maintenance, Appendix I: BWR CRD Rupture Disk Exclusion* *(Note: This OM code case was annulled in the 2017 Edition of the OM Code.)*
OMN-15 (2004 Edition)	*Performance-Based Requirements for Extending the Snubber Operational Readiness Testing Interval at LWR Power Plants*
OMN-15 Revision 2 (2011 Addenda) (2012 Edition) (2015 Edition) (2017 Edition)	*Performance-Based Requirements for Extending the Snubber Operational Readiness Testing Interval at LWR Power Plants*

CODE CASE NUMBER	TABLE 3 OM CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED OM CODE CASES TITLE/CONDITION
OMN-15 Revision 3 (2020 Edition)	*Performance-Based Requirements for Extending the Snubber Operational Readiness Testing Interval at LWR Power Plants*
OMN-16 (2006 Addenda) (2009 Edition) (2012 Edition) (2015 Edition)	*Use of a Pump Curve for Testing*
OMN-16 Revision 1 (2015 Edition)	*Use of a Pump Curve for Testing*
OMN-16 Revision 2 (2017 Edition) (2020 Edition)	*Use of a Pump Curve for Testing*
OMN-17 (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Alternative Rules for Testing ASME Class 1 Pressure Relief/Safety Valves*
OMN-18 (2009 Edition) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Alternate Testing Requirements for Pumps Testing Quarterly Within ±20% of Design Flow*
OMN-19 (2011 Addenda) (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Alternative Upper Limit for the Comprehensive Pump Test*
OMN-20 (2012 Edition) (2015 Edition) (2017 Edition) (2020 Edition)	*Inservice Test Frequency*
OMN-21 (2015 Edition) (2017 Edition) (2020 Edition)	*Alternative Requirements for Adjusting Hydraulic Parameters to Specified Reference Points*
OMN-22	*Smooth Running Pumps* *[OMN-22 incorporated into 2022 Edition]*
OMN-23	*Alternative Requirements for Testing Pressure Isolation Valves*

CODE CASE NUMBER	TABLE 3 OM CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED OM CODE CASES TITLE/CONDITION
(2020 Edition)	
OMN-24 (2020 Edition)	*Alternative Requirements for Testing ASME Class 2 and 3 Pressure Relief Valves (For Relief Valves in a Group of One)*
OMN-25 (2020 Edition)	*Alternative Requirements for Testing Appendix I Pressure Relief Valves*
OMN-26 (2020 Edition)	*Alternate Risk-Informed and Margin Based Rules for Inservice Testing of Motor Operated Valves*
OMN-27 (2020 Edition)	*Alternative Requirements for Testing Category A Valves (Non-PIV/CIV)*

4. Annulled OM Code Cases

ASME has annulled the OM code cases listed in table 4. To assist users, new annulled code cases are shaded in grey to distinguish them from those listed in previous versions of this guide.

Table 4. Annulled OM Code Cases

CODE CASE NUMBER AND YEAR ANNULLED	TABLE 4 ANNULLED OM CODE CASES
OMN-2 2014	*Thermal Relief Valve Code Case, OM Code 1995, Appendix I*
OMN-5 2014	*Testing of Liquid Service Relief Valves Without Insulation*
OMN-14 2014	*Alternative Rules for Valve Testing Operations and Maintenance, Appendix I: BWR CRD Rupture Disk Exclusion*

D. IMPLEMENTATION

The purpose of this section is to provide information to applicants and licensees regarding the NRC staff's plans for using this RG. This RG lists the ASME OM Code: Section IST code cases that the NRC has approved for use as voluntary alternatives to the mandatory ASME OM Code provisions incorporated by reference into 10 CFR 50.55a. The requirements addressing implementation of OM code cases are contained in 10 CFR 50.55a(b)(6). An applicant's or a licensee's voluntary application of an approved code case does not constitute backfitting, inasmuch as there is no imposition of a new requirement or new position. No backfitting is intended or approved in connection with the issuance of this guide.

REFERENCES[1]

1. American Society of Mechanical Engineers (ASME), "Operation and Maintenance of Nuclear Power Plants."[2]

2. *Code of Federal Regulations* (CFR), "Domestic Licensing of Production and Utilization Facilities," Part 50, Chapter I, Title 10, "Energy."

3. CFR, "Licenses, Certifications, and Approvals for Nuclear Power Plants," Part 52, Chapter I, Title 10, "Energy."

4. U.S. Nuclear Regulatory Commission (NRC), Regulatory Guide (RG) 1.84, "Design, Fabrication, and Materials Code Case Acceptability, ASME Section III."

5. NRC, RG 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1."

6. NRC, RG 1.193, "ASME Code Cases Not Approved for Use."

7. NRC, RG 1.262, "ASME Code Cases Approved for Use Without Conditions."

8. NRC, RG 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis."

9. NRC, RG 1.175, "Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing."

10. NRC, RG 1.200, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."

11. NRC, RG 1.201, "Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants According to Their Safety Significance."

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[1] Publicly available NRC published documents are available electronically through the NRC Library on the NRC's public website 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. For problems with ADAMS, contact the Public Document Room staff at 301-415-4737 or (800) 397-4209, or email pdr.resource@nrc.gov. The NRC Public Document Room (PDR), where you may also examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to pdr.resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

[2] Copies of American Society of Mechanical Engineers (ASME) standards may be purchased from ASME, Two Park Avenue, New York, New York 10016-5990; telephone (800) 843-2763. Purchase information is available through the ASME web-based store at https://www.asme.org/Codes/Publications.

APPENDIX A

NUMERICAL LISTING OF ASME OPERATION AND MAINTENANCE CODE CASES

OM Code Case	ASME Action Regarding Code Case	Year OM Code Case Was Developed/Revised	OM Code Case Was Approved in RG 1.192 (Y/N) / Which Revision of RG 1.192	Table Where OM Code Case Is Listed in Revision 6 of RG 1.192
OMN-1	New Reaffirmed[1] Reaffirmed Revised Reaffirmed Revised Reaffirmed Reaffirmed	1996 Addenda 1999 Addenda 2001 Edition 2002 Addenda 2004 Edition 2006 Addenda 2009 Edition 2012 Edition	50.55a[2] Y / Revision 0 N N N Y / Revision 1 N N	All versions of OMN-1 are listed in Table 3
OMN-1, Revision 1	New Reaffirmed Reaffirmed	2009 Edition 2012 Edition 2015 Edition	N Y / Revision 2 N	Table 3 Table 3 Table 3
OMN-1, Revision 2	New Reaffirmed Reaffirmed	2017 Edition 2020 Edition 2022 Edition	Y / Revision 3 Y / Revision 4 Y / Revision 5	Table 3 Table 3 Table 2
OMN-2	New Reaffirmed Reaffirmed Reaffirmed Reaffirmed Annulled	1998 Edition 2001 Edition 2004 Edition 2009 Edition 2012 Edition 2017 Edition	Y / Revision 0 N Y / Revision 1 N Y / Revision 2 N	Table 3 Table 3 Table 3 Table 3 Table 3 Table 4
OMN-3	New Reaffirmed Revised Reaffirmed Reaffirmed Reaffirmed Reaffirmed Reaffirmed Reaffirmed	1998 Edition 2001 Edition 2002 Addenda 2004 Edition 2009 Edition 2012 Edition 2015 Edition 2017 Edition 2020 Edition 2022 Edition	Y/ Revision 0 N N Y / Revision 1 N Y / Revision 2 N Y / Revision 3 Y / Revision 4 Y / Revision 5	Table 3 Table 3 Table 3 Table 3 Table 3 Table 3 Table 3 Table 3 Table 3 Table 2

[1] In some cases, clarifications or editorial changes were made in reaffirmed American Society of Mechanical Engineers (ASME) Operation and Maintenance of Nuclear Power Plants (OM Code) code cases, and notations on where those changes occurred may not have been provided with the ASME OM code case.

[2] OMN-1 was originally accepted in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a, "Codes and standards."

OM Code Case	ASME Action Regarding Code Case	Year OM Code Case Was Developed/Revised	OM Code Case Was Approved in RG 1.192 (Y/N) / Which Revision of RG 1.192	Table Where OM Code Case Is Listed in Revision 6 of RG 1.192
OMN-4	New	1999 Addenda	Y/ Revision 0	Table 3
	Reaffirmed	2001 Edition	N	Table 3
	Reaffirmed	2004 Edition	Y / Revision 1	Table 3
	Reaffirmed	2009 Edition	N	Table 3
	Reaffirmed	2012 Edition	Y / Revision 2	Table 3
	Reaffirmed	2015 Edition	N	Table 3
	Reaffirmed	2017 Edition	Y / Revision 3	Table 3
	Reaffirmed	2020 Edition	Y / Revision 4	Table 3
	Reaffirmed	2022 Edition	Y / Revision 5	Table 2
OMN-5	New	1999 Addenda	Y / Revision 0	Table 3
	Reaffirmed	2001 Edition	N	Table 3
	Reaffirmed	2004 Edition	N	Table 3
	Reaffirmed	2006 Addenda	Y / Revision 1	Table 3
	Reaffirmed	2009 Edition	N	Table 3
	Reaffirmed	2012 Edition	Y / Revision 2	Table 3
	Annulled	2017 Edition	N	Table 4
OMN-6	New	1999 Addenda	Y/ Revision 0	Table 3
	Reaffirmed	2001 Edition	N	Table 3
	Reaffirmed	2002 Addenda	N	Table 3
	Reaffirmed	2004 Edition	N	Table 3
	Revised	2006 Addenda	Y/ Revision 1	Table 3
	Reaffirmed	2009 Edition	N	Table 3
	Reaffirmed	2012 Edition	Y / Revision 2	Table 3
	Reaffirmed	2015 Edition	N	Table 3
	Reaffirmed	2017 Edition	Y / Revision 3	Table 3
	Reaffirmed	2020 Edition	Y / Revision 4	Table 3
	Reaffirmed	2022 Edition	Y / Revision 5	Table 1
OMN-7	New	2000 Addenda	Y/ Revision 0	Table 3
	Reaffirmed	2001 Edition	N	Table 3
	Reaffirmed	2002 Addenda	N	Table 3
	Reaffirmed	2004 Edition	N	Table 3
	Reaffirmed	2005 Addenda	N	Table 3
	Reaffirmed	2006 Addenda	Y / Revision 1	Table 3
	Reaffirmed	2009 Edition	N	Table 3
	Reaffirmed	2012 Edition	Y / Revision 2	Table 3
	Reaffirmed	2015 Edition	N	Table 3
	Reaffirmed	2017 Edition	Y / Revision 3	Table 3
	Reaffirmed	2020 Edition	Y / Revision 4	Table 3
	Reaffirmed	2022 Edition	Y / Revision 5	Table 1

OM Code Case	ASME Action Regarding Code Case	Year OM Code Case Was Developed/Revised	OM Code Case Was Approved in RG 1.192 (Y/N) / Which Revision of RG 1.192	Table Where OM Code Case Is Listed in Revision 6 of RG 1.192
OMN-8	New	2000 Addenda	Y/ Revision 0	Table 3
	Reaffirmed	2001 Edition	N	Table 3
	Reaffirmed	2003 Addenda	N	Table 3
	Reaffirmed	2004 Edition	N	Table 3
	Reaffirmed	2005 Addenda	N	Table 3
	Revised	2006 Addenda	Y / Revision 1	Table 3
	Reaffirmed	2009 Edition	N	Table 3
	Reaffirmed	2012 Edition	Y / Revision 2	Table 3
	Reaffirmed	2015 Edition	N	Table 3
	Reaffirmed	2017 Edition	Y / Revision 3	Table 3
	Reaffirmed	2020 Edition	Y / Revision 4	Table 3
	Reaffirmed	2022 Edition	Y / Revision 5	Table 1
OMN-9	New	2000 Addenda	Y/ Revision 0	Table 3
	Reaffirmed	2001 Edition	N	Table 3
	Reaffirmed	2003 Addenda	N	Table 3
	Reaffirmed	2004 Edition	Y / Revision 1	Table 3
	Reaffirmed	2009 Edition	N	Table 3
	Reaffirmed	2012 Edition	Y / Revision 2	Table 3
	Reaffirmed	2015 Edition	N	Table 3
	Reaffirmed	2017 Edition	Y / Revision 3	Table 3
	Reaffirmed	2020 Edition	Y / Revision 4	Table 3
	Reaffirmed	2022 Edition	Y / Revision 5	Table 2
OMN-10	New	2000 Addenda	N	Code Case OMN-10 has not been approved for use and is listed in RG 1.193
	Reaffirmed	2001 Edition	N	
	Reaffirmed	2003 Addenda	N	
	Reaffirmed	2004 Edition	N	
	Reaffirmed	2006 Addenda	N	
	Reaffirmed	2009 Edition	N	
	Reaffirmed	2012 Edition	N	
	Reaffirmed	2015 Edition	N	
	Reaffirmed	2017 Edition	N	
	Reaffirmed	2020 Edition	N	
	Reaffirmed	2022 Edition	N	
OMN-11[3]	New	2001 Edition	Y / Revision 0	Table 3
	Reaffirmed	2003 Addenda	Y / Revision 1	Table 3
	Reaffirmed	2004 Edition	Y / Revision 1	Table 3
OMN-12	New	2001 Edition	Y / Revision 0	Table 3
	Reaffirmed	2004 Edition	Y / Revision 1	Table 3
	Reaffirmed	2009 Edition	N	Table 3
	Reaffirmed	2012 Edition	Y / Revision 2	Table 3
	Reaffirmed	2015 Edition	N	Table 3
	Reaffirmed	2017 Edition	Y / Revision 3	Table 3
	Reaffirmed	2020 Edition	Y / Revision 4	Table 3
	Reaffirmed	2022 Edition	Y / Revision 5	Table 2

[3] OM Code Case OMN-11 in the 2006 Addenda, 2009 Edition, 2012 Edition, 2015 Edition, 2017 Edition, and 2020 Edition to the ASME OM Code is no longer applicable because the requirements of OM Code Case OMN-11 have been merged into OM Code Case OMN-1.

OM Code Case	ASME Action Regarding Code Case	Year OM Code Case Was Developed/Revised	OM Code Case Was Approved in RG 1.192 (Y/N) / Which Revision of RG 1.192	Table Where OM Code Case Is Listed in Revision 6 of RG 1.192
OMN-13	New Reaffirmed Reaffirmed Reaffirmed Reaffirmed	2001 Edition 2001 Edition 2004 Edition 2009 Edition 2012 Edition	Y/ Revision 0 N Y / Revision 1 N N	All versions of OMN-13 are listed in Table 3
OMN-13, Revision 1	New Reaffirmed	2009 Edition 2012 Edition	N N	All versions of OMN-13, Revision 1, are listed in Table 3
OMN-13, Revision 2	New Reaffirmed Reaffirmed Reaffirmed	2009 Edition 2012 Edition 2015 Edition 2017 Edition	N Y / Revision 2 N Y / Revision 3	Table 3 Table 3 Table 3 Table 3
OMN-13, Revision 3	New	2020 Edition	Y / Revision 4	Table 3
OMN-13, Revision 4	New	2022 Edition	Y / Revision 5	Table 1
OMN-14	New Reaffirmed Reaffirmed Reaffirmed Annulled	2003 Addenda 2004 Edition 2009 Edition 2012 Edition 2017 Edition	N Y / Revision 1 N Y / Revision 2 N	Table 3 Table 3 Table 3 Table 3 Table 4
OMN-15	New Revised Reaffirmed Reaffirmed	2004 Edition 2006 Addenda 2009 Edition 2012 Edition	N N N N	Code Case OMN-15 has not been approved for use and is listed in RG 1.193
OMN-15, Revision 2[4]	New Reaffirmed Reaffirmed Reaffirmed	2011 Addenda 2012 Edition 2015 Edition 2017 Edition	N Y / Revision 2 N Y / Revision 3	Table 3 Table 3 Table 3 Table 3
OMN-15, Revision 3	New	2020 Edition	Y / Revision 4	Table 1
OMN-15, Revision 4	New	2022 Edition	Y / Revision 5	Table 1
OMN-16	New Reaffirmed Reaffirmed	2006 Addenda 2009 Edition 2012 Edition	Y / Revision 1 N N	Table 3 Table 3 Table 3
OMN-16, Revision 1	New Reaffirmed	2012 Edition 2015 Edition	Y / Revision 2 N	Table 3 Table 3
OMN-16, Revision 2	New Reaffirmed Reaffirmed	2017 Edition 2020 Edition 2022 Edition	Y / Revision 3 Y / Revision 4 Y / Revision 5	Table 3 Table 3 Table 1

[4] It should be noted that a different number convention was used with respect to OMN-15; Revision 1 to this OM code case does not exist.

OM Code Case	ASME Action Regarding Code Case	Year OM Code Case Was Developed/Revised	OM Code Case Was Approved in RG 1.192 (Y/N) / Which Revision of RG 1.192	Table Where OM Code Case Is Listed in Revision 6 of RG 1.192
OMN-17	New Reaffirmed Reaffirmed Reaffirmed	2009 Edition 2012 Edition 2015 Edition 2017 Edition	N Y / Revision 2 N Y / Revision 3	Table 3 Table 3 Table 3 Table 3
OMN-17, Revision 1	New Reaffirmed	2020 Edition 2022 Edition	Y / Revision 4 Y / Revision 5	Table 3 Table 1
OMN-18	New Reaffirmed Reaffirmed Reaffirmed Reaffirmed Reaffirmed	2009 Edition 2012 Edition 2015 Edition 2017 Edition 2020 Edition 2022 Edition	N Y / Revision 2 N Y / Revision 3 Y / Revision 4 Y / Revision 5	Table 3 Table 3 Table 3 Table 3 Table 3 Table 1
OMN-19	New Reaffirmed Reaffirmed Reaffirmed Reaffirmed Reaffirmed	2011 Addenda 2012 Edition 2015 Edition 2017 Edition 2020 Edition 2022 Edition	N Y / Revision 2 N Y / Revision 3 Y / Revision 4 Y / Revision 5	Table 3 Table 3 Table 3 Table 3 Table 3 Table 2
OMN-20	New Reaffirmed Reaffirmed Reaffirmed Reaffirmed	2012 Edition 2015 Edition 2017 Edition 2020 Edition 2022 Edition	Y / Revision 2 N Y / Revision 3 Y / Revision 4 Y / Revision 5	Table 3 Table 3 Table 3 Table 3 Table 2
OMN-21	New Reaffirmed Reaffirmed Reaffirmed	2015 Edition 2017 Edition 2020 Edition 2022 Edition	N Y / Revision 3 Y / Revision 4 Y / Revision 5	Table 3 Table 3 Table 3 Table 1
OMN-22	New	2020 Edition	Y / Revision 4	Table 1
OMN-23	New Reaffirmed	2020 Edition 2022 Edition	Y / Revision 4 Y / Revision 5	Table 3 Table 1
OMN-24	New Reaffirmed	2020 Edition 2022 Edition	Y / Revision 4 Y / Revision 5	Table 3 Table 1
OMN-25	New Reaffirmed	2020 Edition 2022 Edition	Y / Revision 4 Y / Revision 5	Table 3 Table 1
OMN-26	New Reaffirmed	2020 Edition 2022 Edition	Y / Revision 4 Y / Revision 5	Table 3 Table 1
OMN-27	New Reaffirmed	2020 Edition 2022 Editon	Y / Revision 4 Y / Revision 5	Table 3 Table 1
OMN-28	New	2022 Edition	Y / Revision 5	Table 1
OMN-29	New	2022 Edition	Y / Revision 5	Table 1
OMN-30	New	2022 Edition	Y / Revision 5	Table 1
OMN-31	New	2022 Edition	Y / Revision 5	Table 2

OM Code Case	ASME Action Regarding Code Case	Year OM Code Case Was Developed/Revised	OM Code Case Was Approved in RG 1.192 (Y/N) / Which Revision of RG 1.192	Table Where OM Code Case Is Listed in Revision 6 of RG 1.192
OMN-32, Revision 0	New	2022 Edition	N	Revision 0 of Code Case OMN-32 has not been approved for use and is listed in RG 1.193
OMN-32, Revision 1	New	2022 Edition	Y / Revision 6	Table 1
OMN-34	New	2022 Edition	Y / Revision 6	Table 1