

FINAL SUPPORTING STATEMENT FOR
10 CFR PART 50.55a
CODES AND STANDARDS

3150-XXXX
NEW

ABSTRACT

The U.S. Nuclear Regulatory Commission (NRC) is authorized by Congress to have responsibility and authority for the licensing and regulation of nuclear power plants, research/test facilities, fuel reprocessing plants and other utilization and production facilities licensed pursuant to the Atomic Energy Act of 1954, as amended (the Act). To meet its responsibilities, the NRC conducts a detailed review of all applications for licenses to construct and operate such facilities. The purpose of the detailed review is to ensure that the proposed facilities can be built and operated safely at the proposed locations, and that all structures, systems, and components important to safety will be designed to withstand the effects of postulated accident conditions, without undue risk to the health and safety of the public. The NRC issues a license or construction permit, with appropriate conditions and limitations, after determining that an application for a license meets certain standards and requirements. Licensees must maintain records and prepare reports to demonstrate their fulfillment of regulatory requirements.

The National Technology Transfer and Advancement Act of 1995 (Public Law 104 113, 1995) (NTTAA) mandates the following:

All Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments.

In carrying out this legislation, Federal agencies are to consult with voluntary consensus standards bodies and participate with such bodies in developing technical standards when such participation is in the public interest and compatible with the agency mission, priorities, and budget resources. If the technical standards are inconsistent with applicable law or otherwise impractical, a Federal agency may choose to use technical standards that are not developed or adopted by voluntary consensus bodies.

The American Society of Mechanical Engineers (ASME), a voluntary consensus body, develops and publishes the ASME Boiler and Pressure Vessel (BPV) Code, which contains requirements for the design, construction, and inservice inspection (ISI) of nuclear power plant components, the ASME Operation and Maintenance of Nuclear Power Plants (OM) Code, which contains requirements for preservice and inservice testing (IST) of nuclear power plant components, and ASME NQA-1, "Quality Assurance Requirements for Nuclear Facility Applications," which contains requirements for quality assurance for nuclear facility applications. ASME also develops Code Cases to gain experience with new technology before incorporating it into the ASME Code; permit licensees to use advances in ISI and IST; offer alternative examinations for older plants; respond expeditiously to user needs; and provide a focused alternative to specific ASME Code provisions. Various technical interests (e.g., utility, manufacturing, insurance, regulatory) are represented on the ASME standards committees. This broad spectrum of stakeholders helps to ensure that the various interests are considered.

The Institute of Electrical and Electronics Engineers (IEEE), a voluntary consensus body, develops and publishes IEEE standards, which contain requirements for the design, construction, and inspection of electrical components used in nuclear power plants and other nuclear facilities. Various technical interests (e.g., utility, manufacturing, regulatory) are represented on the IEEE standards committees. This broad spectrum of stakeholders helps to ensure that the various interests are considered.

Consistent with the NTTAA, it has been the NRC's practice to establish requirements for the design, construction, operation, ISI, and IST of nuclear power plants by approving the use of editions to the ASME BPV and OM Codes and to the IEEE Standards in Title 10 of the Code of Federal Regulations (10 CFR) 50.55a, "Codes and Standards." The NRC approves the use of certain editions of these codes and standards in 10 CFR 50.55a through the rulemaking process of "incorporation by reference" (IBR). Upon IBR of these codes and standards into 10 CFR 50.55a, the provisions of the codes and standards are legally binding NRC requirements as delineated in 10 CFR 50.55a, subject to the conditions on certain specific codes and standards provisions specified in 10 CFR 50.55a. This practice increases consistency across the industry and demonstrates the NRC's willingness to support the use of the most updated and technically sound techniques developed by these voluntary consensus bodies to adequately protect the public.

These regulations affect 94 licensees for operating nuclear power plants. It is expected that no nuclear power plants will be under active construction under 10 CFR Part 52 or 10 CFR Part 50.

This section is a new information collection specific to 10 CFR 50.55a, as it has been separated from the remainder of the 10 CFR Part 50 information collection, which was last renewed in 2020. This section includes the burden from the following 2 rules, which have been approved by OMB since the last renewal of this information collection:

- Approval of American Society of Mechanical Engineers Code Cases (Rev 39), Approved March 2022.
- American Society of Mechanical Engineers 2019-2020 Code Editions, approved October 2022.

A. JUSTIFICATION

1. Need for the Collection of Information

The information is needed in order to determine licensee compliance with the regulations set forth in 10 CFR 50.55a. Details can be found at the end of this supporting statement in "Description of Requirements."

2. Agency Use of Information

Applicants requesting approval to construct or operate, or licensees currently operating, utilization or production facilities are required by the Atomic Energy Act of 1954, as amended (the Act), to provide information and data that the NRC may determine necessary to ensure the health and safety of the public.

The NRC uses the records and reports required in this part to ascertain that licensees are implementing codes and standards requirements to adequately protect the public. The reports and recordkeeping requirements allow the NRC to review documentation to independently assess compliance with these codes and standards requirements as part of its oversight functions.

3. Reduction of Burden Through Information Technology

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 (EIE) process, which is available from the NRC's "Electronic Submittals" Web page, by Optical Storage Media (OSM) (e.g. CD-ROM, DVD), by facsimile or by e-mail. It is estimated that approximately 96% 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.

5. Effort to Reduce Small Business Burden

Not Applicable.

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 able to assess whether licensees are operating within the specific safety requirements applicable to the licensing and operating activities for existing nuclear power reactors.

The information and required frequency from licensees that seek to license and operate nuclear power reactors is essential to NRC's determination of whether the applicant has adequate designs, equipment, programs, training, funds and experience throughout the life of the license to protect the public health and safety.

7. Circumstances which Justify Variation From OMB Guidelines

The information collection requirements within 10 CFR 50.55a, including its incorporated by reference codes and standards, 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 for this clearance package was published in the *Federal Register* on August 30, 2023 (88 FR 59950). Additionally, NRC staff contacted four stakeholders via email. The stakeholders were operating reactor owner/operator licensees from Arizona Public Service Co., Constellation Energy, Dominion Generation and Xcel Energy Inc.

No responses or comments were received from the published FRN or the staff's direct solicitation of comments.

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).

11. Justification for Sensitive Questions

This regulation does not request sensitive information.

12. Estimated Industry Burden and Burden Hour Cost

The total estimated cost for information collection requirements in this section is estimated to be 364,616 hours at a cost of \$105,738,640 (364,616 hours x \$290/hr).

	Hours	Responses
Reporting	119,276	660
Recordkeeping	217,140	94
Third Party Disclosure	0	0
TOTAL	336,416	754

Detailed burden estimates are included in the supplemental burden spreadsheet. The \$290 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 2022 (87 FR 37197, June 22, 2022).

13. Estimate of Other Additional Costs

The quantity of records to be maintained is roughly proportional to the recordkeeping burden and therefore can be used to calculate approximate records storage costs. Based on the number of pages maintained for a typical clearance, the records storage cost has been determined to be equal to .0004 times the recordkeeping burden cost. Therefore, the storage cost for this clearance is estimated to be \$25,188 (217,140 recordkeeping hours x \$290 x .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.

The annualized cost to the government is estimated to be \$8,746,400 (30,160 staff hours x \$290/hr).

15. Reasons for Changes in Burden or Cost

This is a request for a new clearance. Previously, burden for information collections contained in 10 CFR 50.55a was covered under the clearance for 10 CFR Part 50 (3150-0011), estimated at 430,414 hours and 949 responses. The requested burden estimate for 50.55a is 336,416 hours and 754 responses. The decrease in burden associated with information collections in 50.55a is due to a decrease in the total number of respondents from 98 (94 operating reactors and 4 plants under construction) to 94 (94 operating reactors) and a decrease in total responses since OMB Clearance 3150-0011 was last renewed in 2020.

There are no third-party disclosures in this clearance as there are no anticipated nuclear power plants under active construction during this period.

The number of anticipated requests for alternatives submitted in the online portal has decreased from 218 to 47 since the Part 50 clearance was submitted in 2020. The current estimate is based on a review of recent submissions using the online portal. Fewer submissions have been received than was previously anticipated.

IEEE standards were not included in the previous clearance, but there are no recordkeeping or reporting requirements inherent in the standards, so they do not add additional burden on their own.

After the approval of the new clearance for 50.55a and assignment of the new clearance number, the NRC staff intends to remove the burden and responses for these requirements from the Part 50 clearance (3150-0011).

16. Publication for Statistical Use

The information being collected is not expected to 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.

DESCRIPTION OF REQUIREMENTS
10 CFR PART 50.55a
CODES AND STANDARDS

Licensees of nuclear power plants are required to update their inservice inspection (ISI) and inservice testing (IST) programs every 10 years in accordance with the requirements of the latest edition and addenda of the ASME BPV and OM 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. Licensees are required to submit their IST program plans to the NRC within 90 days of their implementation.

Voluntary use of later codes

Paragraphs 10 CFR 50.55a(f)(4)(iv) and (g)(4)(iv) state that inservice tests of pumps and valves, inservice examinations of components, and system pressure tests may 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.

Licensees may use later editions and addenda incorporated by reference in 10 CFR 50.55a if the code of record at their plant is one of the earlier editions and addenda of the ASME BPV and OM Codes. 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 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.

10 CFR 50.55a incorporates by reference Division 1 rules of Section III, "Rules for Construction of Nuclear Power Plant Components," and Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPV Code); and the rules of the ASME "Code for Operation and Maintenance of Nuclear Power Plants" (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 ASME BPV and OM Codes contain information collection requirements that impose a recordkeeping and reporting burden for the plant owners. 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 review or inspection.

Section III Recordkeeping Requirements

Section III, Subsection NCA specifies recordkeeping requirements for Class 1 (Subsection NB), Class 2 (Subsection NC), and Class 3 (Subsection ND) components. These provisions require the Owner to:

- NCA-3230: Owner's Certificate; AIA Agreement. Prepare and submit to the ASME necessary forms to obtain an Owner's Certificate of Authorization, and to obtain a written agreement with an Authorized Inspection Agency (AIA), prior to application, to provide inspection and auditing services (NCA-3230). This activity by the Owner occurs after receipt of notification from the NRC that an application for a Construction Permit or Combined Operating License has been docketed. The information to be supplied by the Owner when making an application is identified in the forms issued by the ASME. (Because this is submitted to the ASME, it is considered a 3rd Party Disclosure requirement and appears on the 3rd Party Table.)
- NCA-3280: Owner's Data Report. Prepare and file ASME Form N-3, "Owner's Data Report for Nuclear Power Plant Components" (NCA-3280). Information to be included on this form identifies the Owner and location of the plant, and the nuclear vessels, piping, and pumps and valves installed within the plant. Information required to identify each component includes certificate holder and serial number, system identification, state number, national board number, and year built (NCA-3280). Form N-3, which is provided by the ASME, expedites the documentation of this information. (one-time recordkeeping)
- NCA-3260: Design Report. Document that a review of the Design Report has been performed to verify that all Design and Service Loadings have been evaluated and meet the acceptance criteria (NCA-3260). (one-time recordkeeping)
- NB/NC/ND-3220: Overpressure Protection Report. Provide and file the Overpressure Protection Report required for the nuclear protection system (NCA-3220 (m) and (n)). This report includes the overpressure protection requirements for each component or system, including location of the overpressure protection devices, identification of the edition and addenda, system drawings, range of operating conditions, and an analysis of the conditions that give rise to the maximum pressure relieving requirements (NB/NC/ND-7200). (one-time recordkeeping)
- Quality Assurance Program. Document a Quality Assurance Program, and file copies of the Quality Assurance Manual with the Authorized Inspection Agency (NCA-8140). This documentation includes programs for surveying, qualifying, and auditing suppliers of subcontracted services (e.g., nondestructive examination contractors, material suppliers, and material manufacturers). Although Section III identifies the need for a documented Quality Assurance (QA) program, the primary NRC requirement for an overall QA program is contained in 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." Therefore, no additional information collection burden is imposed on Owners by the quality assurance provisions of Section III which are incorporated by reference into Section 50.55a.
- Design Specifications. Provide, correlate, and certify Design Specifications (NCA-3250). This requires that the component Design Specification be provided in sufficient detail to form the basis for fabrication in accordance with the rules of Section III. The Design Specifications shall be certified to be correct and complete and to be in compliance with the requirements of NCA-3250 by one or more competent Registered Professional Engineers (NCA-3255). Although this is a requirement of Section III, its incorporation by reference in Section 50.55a does not impose an additional information collection burden on the Owner. Preparation and certification of design specifications for construction of engineered structures is a routine and necessary engineering practice, which occurs with or without the incorporation of this Section III provision into Section 50.55a.

- Record retention periods (no burden). Designate records to be maintained and provide for their maintenance (NCA-3290). Although Section III identifies the need for specific record retention, the primary NRC requirement for record retention is specified in 10 CFR 50, Appendix B, Criterion XVI (Quality Assurance Records). Therefore, no additional information collection burden is imposed on Owners by the record retention provisions of Section III which are incorporated by reference into Section 50.55a.

Section XI

Section XI, Subsection IWA specifies recordkeeping requirements for ISI of Class 1 (Subsection IWB), Class 2 (Subsection IWC), Class 3 (Subsection IWD), Class MC (Subsection IWE), and Class CC (Subsection IWL) components. These recordkeeping requirements require the Owner to:

- Records of Exams: NIS-1 Forms. Prepare records of the preservice and inservice examinations of Class 1 and Class 2 pressure retaining components and their supports on ASME Form NIS-1, "Owner's Report for Inservice Inspections." Information to be included on Form NIS-1, which expedites documentation of the required information, includes identification of the component (i.e., name of component, name of manufacturer, manufacturer serial number, state number, national board number), examination dates, the applicable Section XI edition and addenda, and abstracts of the examination and tests, including results, and any corrective measures (IWA-6230).

Section XI examinations are performed on the basis of a 10-year interval (i.e., all components to be examined, are examined within 10 years), with examinations distributed over three periods.

- Records of Repairs: NIS-2 Forms. Document the repairs and replacements in the inservice inspection summary reports on existing Form NIS-2, "Owner's Report for Repair or Replacements." Information to be included on ASME Form NIS-2 includes identification of the component (i.e., name of component, name of manufacturer, manufacturer serial number, national board number, year built) and system, the applicable construction code and Section XI edition and addenda, repair organization, and a description of the work performed (IWA-6350).
- ISI Plans and Schedules. Prepare plans and schedules for preservice and inservice examination and tests (IWA-6210).
- Records of Component Examination/Tests. Record the results of preservice and inservice examinations of components performed in accordance with Section XI, IWB/IWC/IWD/IWF-2000. Specific requirements for examinations are tabulated in IWB/IWC/IWD/IWF-2500-1 for components such as vessels, piping and their supports. A record of each examination includes the component identification, date of examination, specific Section XI requirement, type of examination (e.g., volumetric, surface, visual), equipment settings, and record of any indications. The examinations are distributed over a 10-year examination interval with examinations being performed at, on average, 18-month refueling outages.

The following additional significant recordkeeping requirements result from implementation of specific Section XI technical requirements:

- Reactor Vessel Exam. The 1995 Edition up to and including the 2019 Edition of Section XI requires examination of essentially 100% of the length of all reactor vessel shell welds during the 2nd, 3rd, and 4th inspection intervals. (Section XI has required examination of essentially 100% of the length of reactor vessel shell welds during the 1st interval since the 1974 Edition as modified by addenda through the 1975 Addenda.)
- Qualification of NDE personnel. Section XI, Mandatory Appendix VII, "Qualification of Nondestructive Examination Personnel for Ultrasonic Examination," specifies requirements for the training and qualification of ultrasonic nondestructive examination (NDE) personnel in preparation for employer certification to perform NDE. Appendix VII specifies requirements for qualification records. These records include those for recertification (e.g., name of individual, qualification level, educational background and experience, statement indicating satisfactory completion of prior training, record of annual supplemental training, results of vision examinations, and current qualification examination results).
- ASME QAI-1 Specification. Table IWA-1600-1 references a revised ASME QAI-1 specification which requires that Authorized Inspection Agencies be accredited by ASME.
- Visual examinations. IWA-2210 describes visual examination requirements and requires calibration records for light meters and test charts.
- Repair plans. IWA-4150 requires repair/replacement activity details to be documented in repair/replacement plans.
- PWR Steam Generator Slewing. IWB-4720 requires records for each pressurized water reactor (PWR) plant in conjunction with each series of steam generator slewing operations during any refueling outage. The records include the Slewing Procedure Specification, procedure qualification, performance qualification for personnel, location records, and examination records.
- Qualification records. Appendix VIII, Article VIII-5000 requires that qualification records be kept. The records are generated when the qualification activities are performed (one-time recordkeeping).
- Welding/Brazing Qualification Records. ASME Code Section XI allows an alternate welding procedure qualification process which allows transfer of procedure qualification records between owners, which provides a less burdensome recordkeeping alternative for qualification records of welding and brazing procedures related to repair and replacement activities.

OM Code

- Records of Pump Tests. Record the results of the preservice and inservice pump tests in accordance with OM Code Subsection ISTB, which provides rules for the preservice and inservice testing of pumps to assess the operational readiness of certain centrifugal and positive displacement pumps. The inservice tests, like the inservice examinations, are established for a 10-year interval, but the testing is performed on a quarterly basis. A record of each test includes the pump identification, date of test or examination, reason for test or examination, test or examination procedure used, values of measured

parameters, identification of test equipment used, calibration records, comparisons with allowable ranges of test and examination values and analysis of deviations, and requirements for corrective action.

- Records of Valve Tests. Record the results of the preservice and inservice valve tests in accordance with OM Code Subsection ISTC, Mandatory Appendix III, and Mandatory Appendix IV, which provide rules for the preservice and inservice testing of valves to assess the operational readiness of certain valves and pressure relief devices. The inservice tests, like the inservice examinations, are established for a ten-year interval, but the testing is performed on a frequency, depending on the valve, from quarterly to every ten years. The types of records to be retained for valve testing are similar to those identified above for pump testing.
- Pump Pressure Instruments. Table ISTB-3510-1 requires more accurate pressure instruments for the comprehensive and preservice pump tests. Records are required for the procurement and periodic calibration of these instruments.
- IST Reporting Requirements. IST Program Test and Examination Plans (IST Plans) for pumps, valves, and dynamic restraints (snubbers) prepared to meet the requirements of the ASME OM Code must be submitted to the NRC within 90 days of their implementation for the applicable 120-month IST Program interval.

10 CFR 50.55a

- Requests for alternatives. 10 CFR 50.55a(z) allows applicants to use alternatives to the requirements of 10 CFR 50.55a paragraphs (c), (d), (e), (f), (g), and (h) when authorized by the NRC.
- Relief requests. 10 CFR 50.55a(f)(5) and 10 CFR 50.55a(g)(5) allow applicants to obtain relief from conformance with ISI and IST code requirements when granted by the NRC.

IEEE Standards

- The IEEE standards incorporated by reference in 10 CFR 50.55a impose certain recordkeeping requirements on licensees. Unlike the ASME BPV Code and OM Code requirements discussed above, these requirements are accounted for under other regulations in 10 CFR Part 50, which is covered by OMB Clearance 3150-0011.

GUIDANCE DOCUMENTS FOR INFORMATION COLLECTION REQUIREMENTS
CONTAINED IN
10 CFR PART 50.55a
CODES AND STANDARDS

Title	Accession number
NUREG-1482, Rev. 3, "Guidelines for Inservice Testing at Nuclear Power Plants"	ML20202A473
Regulatory Guide 1.84, Rev. 39, "Design, Fabrication, and Materials Code Case Acceptability, ASME Section III"	ML21181A225
Regulatory Guide 1.147, Rev. 20, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1"	ML21181A222
Regulatory Guide 1.175, Rev. 1, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing"	ML21140A055
Regulatory Guide 1.178, Rev. 2, "An Approach for Plant-Specific Risk-Informed Decisionmaking for Inservice Inspection of Piping"	ML21036A105
Regulatory Guide 1.192, Rev. 4, "Operation and Maintenance Code Case Acceptability, ASME OM Code"	ML21181A223
Regulatory Guide 1.193, Rev. 7, "ASME Code Cases Not Approved For Use"	ML21181A224
Regulatory Guide 1.106, Rev. 2, "Thermal Overload Protection for Electric Motors on Motor-Operated Valves"	ML112580358
Regulatory Guide 1.118, Rev. 3, "Periodic Testing of Electric Power and Protection Systems"	ML003739468
Regulatory Guide 1.137, Rev. 2, "Fuel Oil Systems for Emergency Power Supplies"	ML12300A122
Regulatory Guide 1.151, Rev. 2, "Instrument Sensing Lines"	ML19156A129
Regulatory Guide 1.152, Rev. 4, "Criteria for Use of Computers in Safety Systems of Nuclear Power Plants"	ML23054A463
Regulatory Guide 1.153, Rev. 1, "Criteria for Safety Systems"	ML003740022
Regulatory Guide 1.168, Rev. 2, "Verification, Validation, Reviews, and Audits for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"	ML13073A210
Regulatory Guide 1.169, Rev. 2, "Configuration Management Plans for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"	ML12355A642
Regulatory Guide 1.170, Rev. 1, "Test Documentation for Digital Computer Software"	ML13003A216

Used in Safety Systems of Nuclear Power Plants”	
Regulatory Guide 1.171, Rev. 1, “Software Unit Testing for Digital Computer Software Used in Safety Systems of Nuclear Power Plants”	ML13004A375
Regulatory Guide 1.172, Rev. 1, “Software Requirement Specifications for Digital Computer Software and Complex Electronics Used in Safety Systems of Nuclear Power Plants”	ML13007A173
Regulatory Guide 1.173, Rev. 1, “Developing Software Life Cycle Processes for Digital Computer Software Used in Safety Systems of Nuclear Power Plants”	ML13009A190
Regulatory Guide 1.180, Rev. 2, “Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems”	ML19175A044
Regulatory Guide 1.209, Rev. 0, “Guidelines for Environmental Qualification of Safety-Related Computer-Based Instrumentation and Control Systems in Nuclear Power Plants”	ML07019029
Regulatory Guide 1.47, Rev. 1, “Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems”	ML092330064
Regulatory Guide 1.53, Rev. 2, “Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems”	ML033220006
Regulatory Guide 1.62, Rev. 1, “Manual Initiation of Protective Actions”	ML101540348
Regulatory Guide 1.75, Rev. 3, “Physical Independence of Electric Systems”	ML043630448
Regulatory Guide 1.212, Rev. 2, “Sizing of Large Lead-Acid Storage Batteries”	ML23118A344
Regulatory Guide 1.137, Rev. 2, “Fuel Oil Systems for Emergency Power Supplies”	ML12300A121
Regulatory Guide 1.22, Rev. 0, “Periodic Testing of Protection System Actuation Functions (Safety Guide 22)”	ML083300530
Regulatory Guide 1.89, Rev 2, “Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plants”	ML22272A602