

**REGULATORY ANALYSIS FOR PROPOSED RULE:
AMENDMENT TO 10 CFR 50.55a, "CODES AND STANDARDS,"
INCORPORATION BY REFERENCE OF THE AMERICAN SOCIETY OF MECHANICAL
ENGINEERS BOILER AND PRESSURE VESSEL CODE CASES
(ADAMS Accession No. ML040480048)**

1. Statement of Problem and Objective

The American Society of Mechanical Engineers (ASME) develops and publishes the *Boiler and Pressure Vessel Code* (BPV Code), which contains requirements for design, construction, and inservice inspection (ISI) of nuclear power plant components, and the *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code), which contains requirements for inservice testing of certain pumps and valves. The ASME publishes a new edition of the BPV Code and the OM Code every three years and a new addenda every year. The ASME also publishes BPV Code cases on a quarterly basis and OM Code cases annually. Code cases provide alternatives to existing Code requirements developed and approved by the ASME. The applicable portions of the BPV Code and the OM Code are incorporated by reference in the Nuclear Regulatory Commission's (NRC) regulations. Alternative requirements in the corresponding Code cases are published in regulatory guides (RGs), which are then incorporated by reference in NRC's regulations. This proposed rule would incorporate by reference Revision 33 of RG 1.84 in place of Revision 32 and would incorporate by reference Revision 14 of RG 1.147 in addition to Revisions 0 through 13.

2. Background

General Design Criterion 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, Criterion 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.

The National Technology Transfer and Advancement Act of 1995 mandated that all Federal agencies 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 the development of 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 elect to use technical standards that are not developed or adopted by voluntary consensus bodies.

Provisions of the ASME BPV Code have been utilized 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. Various interested parties (e.g., utilities, manufacturers, insurance companies, regulatory bodies, NRC) are represented on the ASME standards committees which develop, among other

things, improved methods for the construction and inservice inspection (ISI) of ASME Class 1, 2, 3, metal containment (MC) and concrete containment (CC) nuclear power plant components. This broad spectrum of stakeholders helps to ensure that the various interests are considered.

In 1990, the ASME published the initial edition of the OM Code, which gives rules for inservice testing (IST) of pumps and valves. The OM Code was developed and is maintained by the ASME Committee on Operation and Maintenance of Nuclear Power Plants (ASME OM Committee). The OM Code was developed in response to the ASME Board on Nuclear Codes and Standards directive that transferred responsibility for development and maintenance of rules for the inservice testing of pumps and valves from the ASME Section XI Subcommittee on Nuclear Inservice Inspection to the ASME OM Committee. The ASME intended that the OM Code replace Section XI rules for inservice testing of pumps and valves. The Section XI rules for inservice testing of pumps and valves that were previously incorporated by reference into NRC regulations are no longer updated by the Section XI Committee.

Section 50.55a of the NRC regulations requires that nuclear power plant owners construct Class 1, Class 2, and Class 3 components in accordance with Section III, Division 1, of the ASME BPV Code. Section 50.55a also requires that owners perform ISI of Class 1, Class 2, Class 3, Class MC, and Class CC components in accordance with Section XI, Division 1, of the BPV Code, and that they perform IST of Class 1, Class 2, and Class 3 safety-related pumps and valves in accordance with the OM Code. The ASME publishes a new edition of the BPV Code every three years and new addenda every year. The ASME also publishes Code cases on a quarterly basis (Sections III and XI) or annually (OM Code) to provide alternatives to existing Code requirements developed and approved by ASME. Code cases are developed to gain experience with new technology prior to incorporation into the ASME Code, permit licensees to use advancements in ISI and IST, provide alternative examinations for older plants, provide an expeditious response to user needs, and provide a limited, clearly focused alternative to specific ASME Code provisions.

The NRC has published draft RG 1.84, "Design and Fabrication Code Case Acceptability, ASME Section III," Revision 33 (temporarily designated DG-1124), and draft RG 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," Revision 14 (temporarily designated DG-1125). These draft RGs identify those Code cases which have been determined by the NRC to be acceptable alternatives to applicable requirements in Section III and Section XI.

Prior to July 2003, it had been the NRC's practice to review ASME BPV and OM Code cases, determine their acceptability, specify its findings in RGs which were referenced in Footnote 6 of § 50.55a, and permit nuclear power plant licensees to apply the NRC-approved Code cases as alternatives to the requirements in the ASME BPV Code and the OM Code. Because this practice of generally referencing the RGs does not fully satisfy the notice and comment provisions of the Administrative Procedure Act of 1946 (APA) (5 U.S.C. 551 *et seq.*), as amended, the NRC began the practice of including these Code cases in the Commission's regulations by publishing a final rule on July 8, 2003 (68 FR 40469), which incorporated by reference the RGs listing NRC-approved ASME BPV and OM Code cases. This action accorded the NRC-approved alternative Code cases the same legal status and provided for the same notice and comment provisions, as the ASME BPV Code and the OM Code requirements that are incorporated by reference in 10 CFR 50.55a.

3. Discussion

Code cases are published with three-year expiration dates. Code cases that the ASME has determined a continued need for may be reaffirmed for another three-year term, revised, or incorporated into the ASME BPV or OM Code. The endorsement of a Code case in NRC RGs constitutes acceptance of its technical position for applications not precluded by regulatory or other requirements or by the recommendations in these or other regulatory guides. With regard to the use of any Code case, it is the responsibility of the licensee to ensure that use of the Code case does not conflict with regulatory requirements or licensee commitments. The Code cases listed in the RGs are acceptable for use provided that they are used with any identified limitations or modifications.

Code cases may be revised for many reasons such as to incorporate operational examination and testing experience or to update material requirements based on research results. On occasion, an inaccuracy in an equation is discovered or an examination as practiced is found not to be adequate to detect a newly discovered degradation mechanism. Hence, it follows that when a licensee initially implements a Code case, 10 CFR 50.55a requires that the licensee implement the most recent version of that Code case as listed in the approved or conditionally approved RGs. Code cases superseded by revision are no longer acceptable for initial application, and earlier or later revisions of a Code case are not endorsed by these RGs unless otherwise indicated.

Section III applies only to new construction (i.e., the edition and addenda to be used in the construction of a plant are selected based upon the date of the construction permit and are not changed thereafter, except voluntarily by the licensee). Hence, if a Section III Code case is implemented by a licensee, and a later version of the Code case is incorporated by reference into § 50.55a and listed in the RGs, that licensee may use either version of the Code case.

Section XI ISI and OM IST programs are updated every 10 years to the latest edition and addenda of Section XI that were incorporated by reference into § 50.55a and in effect twelve months before the start of the next inspection and testing interval. Licensees who were using a Code case prior to the effective date of its revision may continue to use the previous version for the remainder of the 120-month ISI or IST interval. This relieves licensees of the burden of having to update their ISI or IST programs each time a Code case is revised by the ASME and approved for use by the NRC. Since Code cases are applicable to specific editions and addenda, and as discussed above, Code cases may be revised because they are no longer accurate or adequate, licensees choosing to continue use of a Code case during the subsequent ISI interval must implement the latest version incorporated by reference into § 50.55a and listed in the RGs.

The ASME may annul Code cases which are no longer required, are determined to be inaccurate or inadequate, or have been incorporated into the BPV or OM Code. The NRC has revised its policy regarding the use of annulled Code cases. A Code case which is listed in an NRC RG as annulled or expired may continue to be used by a licensee that applied the Code case prior to its being so listed until the licensee updates its construction Code of Record or the expiration of the licensee's 120-month ISI/IST update interval, whichever applies, after which the continued use of the Code case is prohibited unless NRC approval is granted under § 50.55a(a)(3).

4. Identification and Analysis of the Alternative Approaches

4.1 Alternative 1 - Take No Action

The take-no-action or status quo alternative would mean that NRC would not update the incorporation by reference of RGs 1.147 and 1.84. This would mean that Revision 32 of RG 1.84 and Revisions 0 through 13 of RG 1.147 would include the latest ASME Code Cases that are incorporated by reference in NRC's regulations. Code cases in the next series of the RGs would not be available for use by the NRC's licensees unless they were approved through the relief request process available under § 50.55a(a)(3).

The NRC does not believe that Alternative 1 is an acceptable approach because of several undesirable outcomes. First, the NRC has taken the position that it is in the best interest of NRC and its licensees to permit the unilateral use of Code cases which have received generic approval by the staff. Not to do so would introduce a prodigious number of relief requests from NRC licensees to apply Code cases that are not approved through the RGs that are incorporated by reference in § 50.55a. This process would be very burdensome to both licensees and the NRC. In its July 8, 2003, rulemaking, the NRC took the position that it is inappropriate to proceed in this fashion. Secondly, pursuing the status quo alternative would undermine the NRC's role as an effective industry regulator. As time passes, the ASME will continue to publish, revise, and annul its Code cases. If Alternative 1 is chosen, outdated and inappropriate material will remain incorporated by reference in the *Code of Federal Regulations*.

4.2 Alternative 2 - Incorporate by Reference NRC-Approved ASME BPV Code Cases in Regulatory Guides 1.84, Revision 33, and 1.147, Revision 14

Alternative 2 is to incorporate the most recent revisions of RGs 1.147 and 1.84. In this case Revision 33 of RG 1.84 would supersede Revision 32 and Revision 14 of RG 1.147 would augment the previously incorporated Revisions 0 through 13. This action would permit NRC licensees to implement Code cases approved by the NRC since the previous revisions of these RGs, along with their limitations and modifications, if any, without seeking prior NRC approval. This would be a continuation of NRC's policy of incorporating by reference the RGs which list NRC-approved alternatives to the provisions of the ASME BPV Code. This alternative continues to provide a sound regulatory basis for NRC's approval of the generic use of Code cases by licensees as alternatives to the provisions of the ASME Codes.

Pursuing this alternative would meet the NRC goal of maintaining safety by continuing to provide NRC approval of new ASME Code Cases. In addition, it would reduce unnecessary regulatory burden by eliminating the need for licensees to submit plant-specific relief requests and for NRC to review those submittals.

This alternative would also increase public confidence by indicating the NRC's continued acceptance of Code cases as alternatives to the provisions of the ASME Codes.

This rulemaking and subsequent updates would involve some additional burden to the NRC because of the need to conduct periodic rulemakings. This burden would be more than offset by the reduction in the number of relief requests that the staff would be obligated to process.

5. Regulatory Impact - Qualitative Costs and Benefits

Since the staff does not recommend maintaining the status quo, this regulatory analysis will examine the qualitative costs and benefits of Alternative 2. These impacts will include some small cost considerations involving reporting and recordkeeping requirements which must be compared to the *status quo* for the purpose of obtaining OMB approval of these estimated changes in licensee burden. Most of the new or revised Code cases in RGs 1.84 and 1.147 have a negligible impact on licensee or NRC burden. This analysis considers that the impact of these Code cases would be cost-neutral. Section 5.1.1 discusses the industry-wide burden reduction that would be expected as a result of the incorporation by reference of the revisions to RGs 1.84 and 1.147. Also, the staff has made a comparison of the three new Code cases which have most significance from a burden reduction standpoint. Thus, a separate discussion about the impacts associated with Code Cases N-508-2, N-600, and N-660/N-662 is provided in paragraphs 5.1.2, 5.1.3, and 5.1.4, respectively.

5.1 Facility Licensees

5.1.1 General

The application of ASME BPV Code cases is attractive to NRC licensees for a number of reasons. The use of Code cases allows licensees to use advanced techniques, procedures, and measures on a trial basis to gain experience. This experience is used to either refine or reject the new provisions. Code cases are also suited for use in areas where the application of risk-informed principles indicates that the number of examinations or tests has been excessive or that occupational exposure can be reduced. Alternative 2 has the advantage that the latest Code cases that are generically approved by the NRC through the RGs will be available to licensees upon implementation of the final rule.

In addition to the above-stated advantages in licensee application of Code cases, there is a general licensee burden reduction associated with the incorporation by reference of NRC-approved Code cases. Once a Code case is approved by the ASME, the licensee must make a determination as to the applicability of the Code case to its facility and the benefit to be derived. If a licensee elects to apply a Code case and the NRC has not incorporated that Code case into its regulations, the licensee must prepare a relief request pursuant to § 50.55a(a)(3). The NRC estimates that this process would involve an average of three person-weeks or 120 hours of effort by a licensee for each relief request. At an estimated labor rate of \$86¹ per hour, this would result in a cost to the licensee of \$10,320 per relief request. It is expected that licensees deciding whether relief should be sought would weigh this cost against the benefit to be

¹It should be noted that the NRC labor rates presented here differ from those developed under the NRC's license fee recovery program (10 CFR Part 170). For regulatory analysis purposes, labor rates are developed under strict incremental cost principles wherein only variable costs that are directly related to the implementation and operation and maintenance of the proposed requirement are included. This approach is consistent with guidance set forth in NUREG/CR-3560, "A Handbook for Value-Impact Assessment," and general cost-benefit methodology. Alternatively, NRC labor rates for fee recovery purposes are appropriately designed for full cost recovery of the services rendered and as such include nonincremental costs (e.g., overhead, administrative, and logistical support costs).

derived. In some cases, licensees would decide to forfeit the benefits of using a Code case, whether in terms of radiological considerations or burden reduction. The NRC estimates that this would occur in the case of approximately 15 percent of the ASME Code cases.

If it is assumed that each of NRC's 103 licensed reactor facilities desired to implement one of the 34 new or revised² Code cases, under Alternative 1, 88 relief requests (i.e., 85 percent of 103 Code cases) would be prepared at an industry-wide cost of approximately \$908,160 (88 Code cases X 120 hours per Code case X \$86 per hour). Under Alternative 2, 103 new Code cases would be implemented with no cost impact for relief request preparation, thus saving the industry \$908,160. The NRC also estimates that a reduction of approximately 1.6 hours per relief request would be attributable to the reduced paperwork reduction requirements and would reduce this burden industry-wide by approximately 141 hours (88 Code cases X 1.6 hours per Code case).

5.1.2 Code Case N-508

This Code case would permit licensees, under certain conditions, to use maintenance personnel rather than VT-2 qualified personnel for the testing of pressure relief valves. This Code case recognizes the fact that examinations of pressure relief valves are straightforward and usually involve a visual inspection for leaks. Information from the industry inservice inspection specialist indicates that this Code case could be used in the testing of 30 components a year per plant. The personnel savings would be approximately three hours per component. The most significant factor in this reduction in personnel effort is that VT-2 qualified personnel would follow detailed Code prescribed examination procedures that are unnecessary for this examination as opposed to the less stringent procedures that would be followed by maintenance personnel. It is estimated that all 103 nuclear reactor facilities would avail themselves of the use of this Code case. Therefore the annual industry-wide burden reduction is estimated to be \$797,220 (3 hours X 30 components X 103 facilities X \$86 per hour).

The implementation of this Code case would not modify reporting requirements but would result in a small burden reduction in the area of recordkeeping requirements. For inspections of pressure relief valves, licensees applying this Code case would no longer need to maintain records of qualifications of VT-2 personnel previously performing these examinations. These records would include information on the date of the qualification and the frequency of requalification, scope of the qualification, and scores on qualifying examinations. It is estimated that the burden reduction would be approximately 10 minutes per component. Thus, the industry-wide burden reduction for reporting would be approximately 515 hours (30 components X 103 facilities X 10 minutes ÷ 60 minutes/hour) or \$42,290 (515 hours X \$86 per hour).

5.1.3 Code Case N-600

The ASME Code requires utility licensees to qualify welders, welding operators, brazers, and brazing operators. These individuals typically work for several licensees each year and must pass the qualification tests at each location. Rather than having to requalify these individuals for each licensee, Code Case N-600 would permit a licensee to use another owner's welding and brazing performance qualification. Information from industry inservice inspection

²The NRC treats revised and new Code cases in the same fashion.

specialists indicates that there is currently one performance qualification per month per plant. Under this Code case, the number of performance qualifications would decrease to one per year. The cost of the performance qualifications varies between approximately \$10,000 for routine testing requiring only tensile and bend tests to \$50,000 for complex performance qualifications requiring base metal procurement and impact testing. Approximately 80 percent of the performance qualifications are routine. Thus a weighted average for performance qualifications would be approximately \$18,000 (.8 X \$10,000 + .2 X \$50,000). This would result in an industry-wide burden reduction of \$1,584,000.

This Code case also contains no new reporting requirements but does have some minor recordkeeping implications. Facilities performing the brazer qualification examination would have a slightly greater reporting burden because, in addition to the existing recordkeeping required, records of the qualification tests would need to be provided to other licensees. Also, records such as addresses to whom records were sent and copies of materials transmitted would need to be retained. Recipient licensees would experience a slight decrease in recordkeeping burden because the records to be retained would be the copies of qualification results received and not detailed records of the qualification documentation. The NRC estimates that licensees who perform brazer qualifications would share qualification documentation with at least three other licensees. If it is assumed that each performing licensee experiences a four-hour burden increase in recordkeeping burden for each qualification performed, the burden increase would be approximately 104 hours (26 performing licensees X 4 hours) across the industry per year. If the recipient licensees experience a two-hour reduction in reporting burden by applying this Code case, the burden reduction would be approximately 154 hours (77 recipient licensees X 2 hours). Therefore, a total burden reduction across the industry would be approximately 50 hours per year or \$4,300.

5.1.4 Code Cases N-660 and N-662

Code Case N-660 would provide licensees operating pressurized water reactors with a methodology for classifying structures, systems, and components (SSCs) for use in a risk-informed inservice inspection repair/replacement program. Code Case N-662 would provide licensees of PWRs with a methodology for repairing and replacing SSCs classified per Code Case N-660. Thus, Code Case N-660 and Code Case N-662 were developed to be used jointly.

The Westinghouse Owners Group (WOG) developed a detailed generic cost-benefit assessment (dated August 8, 2002) to support the implementation of the proposed 10 CFR 50.69 by the WOG members. Code Cases N-660 and N-662 were included as part of the proposed 10 CFR 50.69 program. The cost-benefit assessment performed by the WOG addressed only the 48 Westinghouse PWRs. The costs for program development and expected savings after implementation of Code Cases N-660 and N-662 for non-Westinghouse PWRs are expected to be on the same order of magnitude. The cost-benefit assessment assumed that current treatment requirements for high-safety-significant SSCs are unchanged and the treatment requirements for low-safety-significant components are based on the classification and treatment framework in Code Cases N-660 and N-662. Based on the demonstration program categorization work and insights from other plant risk-informed programs (e.g., maintenance rule, risk-informed ISI), it is estimated that a program scope that includes 12 plant systems may provide optimal results.

The cost elements are divided into program development and program implementation costs. The categorization effort is the primary contributor to the program development costs. Program implementation costs are the result of efforts to revise plant procedures and design specifications in order to address changes related to the reduction in special treatment requirements for low-safety-significant safety-related sacs. The estimated cost for program development and implementation for Code Cases N-660 and N-662 is \$600,000 per unit. The estimated costs for program development and implementation at a two-unit site is \$825,000.

The estimated potential savings after Code Cases N-660 and N-662 have been applied by a licensee is \$275,000 per unit per year. Using the above estimated costs and savings, it would take a one to two years to fully recover the cost of development and implementation and would save approximately \$275,000 per year thereafter.

Therefore, if the program development and implementation costs are spread over the first three years for a single unit site, the \$200,000 per year cost would be offset by a cost savings of \$275,00 per year producing an estimated \$75,000 savings for the first three years and a \$275,000 savings thereafter in today's dollars. During the first three years, the development and implementation costs of \$273,000/year would be offset by a \$550,000 cost savings for a cost savings of \$277,000 per year and a \$550,000 savings per year thereafter. The NRC currently has 103 licensed reactors. Although these Code cases are specific to Westinghouse reactors, if each NRC licensed reactor implements these Code cases or the equivalent and the savings per unit is \$275,000 per year there is the potential for annual savings for the industry of \$28,325,000 per year.

These Code cases themselves will not have recordkeeping or reporting requirements associated with them. However, the NRC plans to require that licensees keep records on, and report activities associated with, the categorization and repair/replacement to be performed in compliance with the voluntary options to be published in 10 CFR 50.69, which will allow licensees to use risk-informed processes for categorizing reactor structures systems and components (SSC) according to their safety significance to reduce the scope of SSCs that are subject to special treatment requirements. Those recordkeeping requirements, which will include any associated with Code Cases N-660 and N-662, will be addressed as part of the 10 CFR 50.69 rulemaking.

5.1.5 Totals

Disregarding the development and implementation costs for Code Cases N-660/N-662, the burden reduction for the operation of the 103 nuclear power reactors, including a burden reduction of \$46,590 for recordkeeping, is estimated to be \$31,660,970 (\$908,160 + \$797,220 + \$1,584,000 + \$28,325,000 + \$46,590) per year. The average remaining lifetime of NRC licensed power reactors is approximately 17 years. If it is assumed that each facility applies for and is granted a license renewal (an additional 20 years), the present value of the burden reduction assuming a seven percent discount rate for 37 years would be \$415,075,317 ($13.11^3 \times \$31,660,970$).

³Annuity Discount Factor for an annuity of \$1 at a discount rate of seven percent taken for 37 years.

With respect to recordkeeping requirements, Code Case N-508 contains 3090 responses with a burden reduction of ten minutes. Code Case N-600 contains 77 responses at two hours of burden reduction per response and 26 responses at a minus four hour burden reduction per response. Thus the weighted average for these Code cases would be .176 hours $[(3090 \times 10 \text{ minutes}/60 \text{ minutes}/\text{hour}) + (77 \times 2 \text{ hours}) - (26 \times 4 \text{ hours})]/3193 \text{ responses}]$. Otherwise stated, the burden reduction for recordkeeping would involve 3193 responses with an average of 10.6 minutes per response. The average number of hours of recordkeeping burden reduction per NRC licensee is approximately 5.48 hours ((515 hours for Code Case N-508 + 50 hours for Code Case N-600)/103 licensees)). Additionally there is an estimated industry-wide reduction 141 hours for the anticipated reduction in the number of relief requests that licensees would submit.

5.2 NRC Staff

The NRC would also realize a burden reduction if Alternative 2 is pursued. If Alternative 2 is undertaken, 34 new or revised Code cases will be incorporated by reference in § 50.55a. If each licensee wishes to apply one of these Code cases, 88 (85% of 103 licensees) Code cases would be submitted for NRC review and approval under the provisions of §50.55a(a)(3) under Alternative 1. It is estimated that each relief request would require approximately two staff-weeks or 80 hours to review and approve. Thus, the NRC would save approximately \$650,440 (88 relief requests X 80 person-hours X \$86 per hour) under Alternative 2.

6. Decision Rationale

The staff recommends Alternative 2. As discussed above, this alternative meets the NRC goal of maintaining safety by continuing to provide NRC approval of new and revised ASME Code cases. In addition, it would reduce unnecessary regulatory burden by eliminating the need for licensees to submit plant-specific relief requests and for NRC to review those submittals. Finally, this alternative would also increase public confidence by indicating the NRC's continued acceptance of Code cases as alternatives to the provisions of the ASME Codes.

Several other important considerations lead the staff to recommend Alternative 2. These include the industry's familiarity with the process of Code case approval through NRC regulatory guides, the public perception of a more consistent treatment of the Code case approval process across the industry, and the public perception that the NRC will continue to support the use of the most updated and technically sound techniques as developed by the ASME while continuing to provide adequate protection to the public.

7. Implementation Schedule

After the publication of the proposed rule in the *Federal Register* and the consideration and resolution of the public comments, a final rule, which will become effective 30 days after its publication in the *Federal Register*, will be published.

8. Acceptable New or Revised Code Cases Added to RG 1.84 and RG 1.147

Code cases provide alternatives to existing requirements contained in the ASME BPV Codes. Code cases are implemented voluntarily by licensees. Thus, the revised regulatory guides do not impose new or amended requirements. In addition, the BPV Codes have been

incorporated by reference into 10 CFR 50.55a in previous amendments and hence the inservice examinations and inservice testing provisions incorporated into § 50.55a are presently being performed by licensees. As a rule, the use of the alternative provisions of the Code cases does not result in associated installation or continuing costs. This is because revisions to Code cases are typically minor in nature (e.g., clarifications or improvements upon inspection methods). Finally, since many Code cases provide more effective examinations and tests, implementation of Code cases generally results in a burden reduction.

The new or revised Code cases listed in the revised versions of RG 1.84 and 1.147 are contained in Supplement 12 to the 1998 Edition and Supplement 1 through Supplement 6 to the 2001 Edition and are acceptable to the NRC staff for application in the design, construction, and ISI of components and their supports for water-cooled nuclear power plants. A listing of the acceptable and conditionally acceptable new and revised Code cases in these guides is also contained in *Evaluation of Code Cases in Supplement 12 to the 1988 Edition and Supplement 1 Through Supplement 6 of the 2001 Edition*. For those Code cases that are conditionally acceptable, this document contains a summary of the basis for the limitations placed on the use of the each Code case. The *Evaluation of Code Cases* is available to the public under Accession No. ML040480074 in the NRC's Agency wide Documents Access and Management System(ADAMS). Publicly available documents in ADAMS are accessible via the NRC's Electronic at <http://www.nrc.gov/reading-rm/adams.html>. The public is invited to submit comments on this regulatory analysis and on the Evaluation of Code Cases as part of this rulemaking.