

REGULATORY ANALYSIS FOR FINAL RULE:
AMENDMENT TO 10 CFR 50.55a, "CODES AND STANDARDS"
INCORPORATION BY REFERENCE OF ASME BPV CODE CASES

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 3 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 NRC's 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 final rule supersedes the incorporation by reference of RG 1.84 Revision 32 with Revision 33 and augments the incorporation by reference of Revisions 0 through 13 of RG 1.147 with Revision 14. RG 1.192, which lists NRC-approved Code Cases applicable to the OM Code, is not superseded at this time because no new OM Code Cases have been approved for use.

2. Background

General Design Criterion 1, "Quality Standards and Records," of 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," 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, applying the technical standards as a means to carry out agencies' policy objectives and activities. 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 for establishing the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety. Various interested parties (e.g., utility, manufacturing, insurance, regulatory, 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 3 years and new addenda every year. The ASME also publishes Code Cases quarterly (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 before the alternative requirements are incorporated into the ASME Code. Code Cases also permit licensees to use advancements in ISI and IST and provide alternative examinations for older plants, expeditious responses to user needs, and limited, clearly focused alternatives to specific ASME Code provisions.

The NRC has published Regulatory Guide 1.84, "Design and Fabrication Code Case Acceptability, ASME Section III," Revision 33, and Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," Revision 14. These RGs identify Code Cases that NRC has determined to be acceptable alternatives to applicable requirements in Section III and Section XI.

Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code," endorses ASME Operations and Maintenance (OM) Code Cases OMN-1 through OMN-13. RG 1.192 is not superseded at this time because no new Code Cases addressing the OM Code have been approved. Regulatory Guide 1.193, "ASME Code Cases Not Approved for Use," lists Section III, Section XI, and OM Code Cases that the NRC has determined to be unacceptable for use by licensees. RG 1.193 is not part of this rulemaking. It was developed at the industry's request to provide a list of the Code Cases that the NRC staff has determined to be unacceptable for use in licensee design and construction, inservice inspection, and inservice testing programs. Providing the bases for disapproval of Code Cases affords NRC licensees the opportunity to address NRC staff concerns and seek relief through the provisions of 10 CFR 50.55a(a)(3), which permits the use of alternatives to ASME Code requirements provided the proposed alternatives result in an acceptable level of quality and safety and their use is authorized by the Director of the Office of Nuclear Reactor Regulation.

On July 8, 2003 (68 FR 40469), the NRC initiated the practice of incorporating by reference the RGs listing NRC-approved ASME BPV and OM Code Cases. As a result of this practice the NRC-approved Code Cases have the same legal status and are subject to 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 3-year expiration dates. Code Cases that the ASME has determined a continued need for may be reaffirmed for another 3-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. The licensee is responsible for ensuring 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 within the limits specified in the Code Case.

Code Cases may be revised for many reasons, for example to incorporate operational examination and testing experience and 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, 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 RGs incorporated by reference. Code Cases superseded by revision are no longer acceptable for initial application 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 on 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, the 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 was incorporated by reference into § 50.55a and in effect 12 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 program 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 since Code Cases may be revised because they are no longer accurate or adequate, licensees choosing to continue using 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. If a licensee applied a Code Case before it was listed as annulled or expired, the licensee may continue to use the Code Case until the licensee updates its construction Code of Record or until the licensee's 120-month ISI/IST update interval expires, 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 is not to update the incorporation by reference of Regulatory Guides 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 be 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 licensee's and the NRC's best interest to permit the unilateral use of Code Cases which have received generic approval by the staff. Not to do so would result in 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 the licensee 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 regulatory guides listing NRC-approved Code Cases into the *Code of Federal Regulations*. This action would permit NRC licensees to implement Code Cases approved by the NRC since the previous revisions of these regulatory guides, 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 regulatory guides 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 incorporated by reference in the NRC regulations.

Pursuing this alternative meets 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 support NRC's goal of maintaining the openness of NRC's regulatory process because acceptance of ASME Code Cases demonstrates the agency's commitment to participate in the national consensus standards process which includes the participation of many public and government entities.

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 costs include the minor costs of compliance with reporting and recordkeeping requirements which OMB must approve. Most of the Code Cases that are new to RGs 1.84 and 1.147 have a negligible impact on licensee or NRC burden. The impact of these Code Cases would be cost neutral. Section 5.1.1 discusses the expected industry-wide burden reduction as a result of the incorporation by reference of the revisions to RG 1.84 and 1.147. The staff has also compared the three new Code Cases that are most significant from a burden reduction standpoint. The impacts of Code Cases N-508-2, N-600, and N-660/N-662 are discussed in paragraphs 5.1.2, 5.1.3, and 5.1.4.

5.1 Facility Licensees

5.1.1 General

The application of ASME BPV Code Cases is attractive to NRC licensees for several reasons. Applying Code Cases allows licensees to use advanced techniques, procedures, and measures on a trial basis to gain experience. The 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 there are too many examinations or tests or that occupational exposure can be reduced. Alternative 2 has the advantage that, on implementation of this final rule, licensees will be able to use the latest Code Cases that have been generically approved by the NRC through regulatory guides..

In addition, a general reduction in licensee burden is 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 of 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 the 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 3 person-weeks or 120 hours of licensee effort 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 to request relief would weigh this cost against the benefit to be derived. In some cases, licensees would decide that the cost of seeking a relief request in order to apply the Code Case is not justified by the reduction in radiological exposure or burden. The NRC estimates that this would occur in the case of approximately 15 percent of the ASME Code Cases.

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 and include only variable costs that are directly related to the implementation and operation and maintenance of the proposed requirement. This approach is consistent with guidance set forth in NUREG/CR-3560, "A Handbook for Value-Impact Assessment," and the 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).

If it is assumed that 85 percent of NRC's 104 licensed reactor facilities desired to implement one of the 31 new Code Cases, under Alternative 1, 88 relief requests (i.e., 85 percent of 104 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). Under Alternative 2, 104 new Code Cases would be implemented without the cost of preparing relief requests, thus saving the industry \$908,160.

The NRC 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) and an annual cost savings of \$12,126 (141 hours X \$86 per hour).

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 examination 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 industry inservice inspection specialists indicates that this Code Case could be used in the testing of 30 components a year per plant. The personnel savings would be approximately 3 hours per component. The most significant factor in this reduction in personnel effort is that VT-2 qualified personnel would no longer follow detailed Code-prescribed examination procedures that are unnecessary for this examination. Instead, maintenance personnel would follow the less stringent procedures. It is estimated that all 104 nuclear reactor facilities would take advantage of this Code Case. Therefore the annual industry-wide burden reduction is estimated to be \$804,960 (3 hours X 30 components X 104 facilities X \$86).

The implementation of this Code Case would not modify reporting requirements but would result in a small burden reduction in 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 (e.g., the date of the qualification and the frequency of requalification, scope of the qualification, and scores on qualifying examinations) that previously performed these 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 520 hours (30 components X 104 facilities X 10 minutes ÷ 60 minutes) or \$44,720 (520 hours X \$86).

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 for these individuals, instead of requalifying them again. Information from industry inservice inspection 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 range of cost per performance qualification is approximately \$10,000 for routine tensile and bend to \$50,000 for complex performance qualifications requiring base metal procurement and impact testing. Approximately 80% 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). Since each plant would perform one performance qualification per year instead of twelve, the annual industry wide burden reduction would be \$ 2,059,200 (\$18,000 per performance qualification X 11 performance qualifications saved X 104 plants).

This Code Case 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 the addressees to which 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. Assuming that each performing licensee experiences a 4-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 2-hour reduction in reporting burden by applying this Code Case, the burden reduction would be approximately 156 hours (78 recipient licensees X 2 hours). Therefore, the total burden reduction across the industry would be approximately 52 hours per year or \$4,472.

5.1.4 Code Cases N-660 and N-662

Code Case N-660 would give licensees of pressurized water reactors (PWRs) 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 give PWR licensees a methodology for repairing and replacing SSCs classified per Code Case N-660. Code Cases N-660 and 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 10 CFR 50.69 by the WOG members. Code Cases N-660 and N-662 are elements of the 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., the maintenance rule, risk-informed ISI), it is estimated that a program scope that includes 12 plant systems may provide optimal results.

The costs are divided into program development costs and program implementation costs. The categorization effort is the primary contributor to the program development costs. Program implementation costs primarily consist 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 SSCs. The estimated costs 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 a licensee has applied Code Cases N-660 and N-662 is \$275,000 per unit per year. Assuming these estimated costs and savings, it would take a licensee approximately 1 to 2 years to fully recover the cost of development and implementation. A licensee would save approximately \$275,000 per year thereafter.

Therefore, if the program development and implementation costs are spread over the first 3 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 3 years and a \$275,000 savings thereafter in today's dollars. During the first 3 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 for a 2-unit site. The NRC currently has 104 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, the industry could save \$28,600,000 per year.

No recordkeeping or reporting requirements will be associated with these Code Cases. However, the NRC plans to require that licensees keep records on, and report activities associated with, the categorization and the repair or replacement to be performed in compliance with the voluntary options to be published in 10 CFR 50.69. These options will allow licensees to use risk-informed processes for categorizing reactor structures, systems, and components (SSCs) according to their safety significance in order to reduce the scope of SSCs that are subject to special treatment requirements. The recordkeeping requirements, including any associated with Code Cases N-660 and N-662, have been addressed as part of the 10 CFR 50.69 rulemaking.

5.1.5 Totals

The following table summarizes the burden reduction estimates associated with this rulemaking:

	Burden Reduction – Recordkeeping	Burden Reduction – Implementation
Elimination of Relief Requests	\$12,126	\$908,160
Code Case N–508	\$44,720	\$804,960
Code Case N–600	\$4,472	\$2,059,200
Code Cases N-660/N–662	N/A	\$28,600,000 ²
Total	\$61,318	\$32,372,320

“Burden Reduction – Recordkeeping” in the table above represents the dollar value of time saved by NRC licensees, at the estimated rate of \$86 per hour. Code Case N–508 reduces burden by 10 minutes on 3120 responses. Code Case N–600 reduces burden by 2 hours on 78 responses and increases burden by 4 hours on 26 responses. Relief requests (Section 5.1.5) will account for an additional burden reduction of 1.6 hours on 88 responses or 141 hours across the industry. Overall, the burden reduction for recordkeeping would involve 3312 responses with an average reduction of 12.9 minutes per response³. Each NRC licensee could expect its recordkeeping burden to be reduced by approximately 6.9 hours⁴ – an annual burden reduction of \$62,318 across the industry.

For the 104 nuclear power reactors, the total burden reduction, combining the benefits of code case implementation and decreased recordkeeping, is estimated to be \$32,421,512 per year. The average remaining lifetime of NRC licensed power reactors is approximately 17 years. If each facility is granted a license renewal for an additional 20 years, the present value of the burden reduction (assuming a 7% discount rate for 37 years) would be \$425,046,022⁵.

5.2 NRC Staff

The NRC will also realize a burden reduction if Alternative 2 is pursued. If Alternative 2 is undertaken, 31 new Code Cases will be incorporated by reference in § 50.55a. As discussed in Section 5.1.1, the NRC assumes that 85 percent of reactor licensees (i.e., 88 licensees) would find it cost beneficial to apply one of these Code Cases. Thus, 88 Code Cases would be submitted for NRC review and approval under the provisions of §50.55a(a)(3) under Alternative

² Does not include the development and implementation costs for Code Case N-660/N-662.

³ $[(3120 \times 10 \text{ minutes} / 60 \text{ minutes/hour}) + (78 \times 2 \text{ hours}) - (26 \times 4 \text{ hours}) + (1.6 \text{ hours} \times 88 \text{ relief requests})] / 3312 \text{ responses}$

⁴ $(520 \text{ hours for Code Case N–508} + 52 \text{ hours for Code Case N–600} + 141 \text{ hours for 88 relief requests}) / 104 \text{ licensees}$

⁵ $(13.11 \times \$32,435,638)$, where 13.11 represents the Annuity Discount Factor for an annuity of \$1 at a discount rate of 7% taken for 37 years.

1. It is estimated that each relief request would require approximately 2 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) 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 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 support NRC's goal of maintaining the openness of NRC's regulatory process because acceptance of ASME Code Cases demonstrates the agency's commitment to participate in the national consensus standards process which includes the participation of many public and government entities.

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

7. Implementation Schedule

This final rule becomes effective 30 days after its publication in the *Federal Register*.

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 carried out by licensees. As a rule, the use of the alternative provisions of the Code Cases does not result in installation costs or continuing costs. This is because revisions to Code Cases are typically minor in nature (e.g., clarifications or improvements on 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 RGs 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 conditionally acceptable Code Cases, 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* document is available to the public under Accession No. ML050940259 in the NRC's Agencywide Documents Access and Management System (ADAMS). Publicly available documents in ADAMS are accessible via the NRC's Electronic Public Reading Room at <http://www.nrc.gov/reading-rm/adams.html>.