

ENVIRONMENTAL ASSESSMENT OF AMENDMENT TO 10 CFR 50.55a, "CODES AND STANDARDS"

Incorporation by Reference - 2001 Edition and 2002 and 2003 Addenda of ASME BPV AND OM Code

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, this document presents the findings of the U.S. Nuclear Regulatory Commission's (NRC) environmental assessment of a final rule to incorporate by reference in 10 CFR 50.55a the 2001 Edition and the 2002 and 2003 Addenda of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (BPV Code) and the ASME *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code).

NRC's regulations for implementing Section 102(2) of the National Environmental Policy Act of 1969 (NEPA), as amended, are contained in Subpart A of 10 CFR Part 51. These regulations require that an environmental impact statement or an environmental assessment be prepared for all licensing and regulatory actions that are not classified as "categorical exclusions" in accordance with 10 CFR 51.22(c) and are not identified in 10 CFR 51.22(d) as other actions not requiring environmental review.

Identification of the Action

This action will amend NRC regulations in § 50.55a to specify the use of the most up-to-date technologies and methods for design, construction, inservice inspection (ISI), and inservice testing (IST) of nuclear power plants components. This action incorporates by reference the following: (1) the 2001 Edition and the 2002 and 2003 Addenda of Section III, Division 1, "Rules for Construction of Nuclear Power Plant Components," of the ASME BPV Code; (2) the 2001 Edition and the 2002 and 2003 Addenda of Section XI, Division 1, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME BPV Code; and (3) the 2001 Edition and the 2002 and 2003 Addenda of the ASME OM Code. This action will accord the provisions in the 2001 Edition and the 2002 and 2003 Addenda of the ASME BPV Code and OM Code the same legal status as the earlier editions and addenda of the ASME BPV Code and OM Code that have been incorporated by reference in § 50.55a.

Need for the Action

The National Technology Transfer and Advancement Act of 1995, Public Law 104-113, requires that if agencies establish technical standards, that the agencies use standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or is otherwise impractical. The ASME BPV and OM Code is a national consensus standard developed by participants with broad and varied interests in which all interested parties (including the NRC and licensees of nuclear power plants) participate. New editions of the ASME BPV Code and OM Code are issued every 3 years. Addenda to the editions are issued yearly except in years when a new edition is issued. It has been the NRC's practice to periodically review the revisions in each edition and addenda, and to periodically update § 50.55a to keep current the ASME Code editions and addenda incorporated by reference. It has also been the policy of the Commission to explicitly identify all portions that are not being adopted and justify why those portions of the ASME BPV Code and OM Code are not acceptable for use. Section 50.55a was most recently updated on September 26, 2002 (67 FR 60520), to incorporate by reference the 1998 Edition of the ASME BPV Code and OM Code up to and including the 2000 Addenda.

Environmental Impacts of the Action

This rule applies only to Part 50 licensees of operating nuclear power reactors. The ASME Code has been revised on a continuing basis over the years to provide updated provisions for the design, construction, and ISI of pressure boundary components and the testing of pumps and valves in nuclear power plants. Typically, the successive editions and addenda of the ASME Code contain many new and revised Code provisions. Although some new and revised Code provisions have increased requirements and others have decreased requirements, the staff has generally considered the evolution of the ASME Code to result in a net improvement in the provisions for constructing and inspecting components and testing pumps and valves. Therefore, the NRC does not believe that this rulemaking increases the probability or consequences of accidents; affects the types of effluents that might be released off-site; increases occupational exposure; or increases the probability of radiation exposure to the public. The NRC does not expect significant radiological impacts associated with this action.

The NRC staff has identified one revision to Section XI that would result in a small reduction in occupational exposure. Paragraph IWA-5242 of Section XI of the ASME BPV Code (2003 Addenda) eliminated the requirement to remove insulation from bolted connections in borated systems when performing a system leakage test provided that the bolting is resistant to boric acid corrosion. This revision reduces occupational exposure because the installation/removal of insulation and the installation/removal of scaffolding to support the removal/installation of insulation are no longer required when bolting resistant to boric acid corrosion is installed in a borated system. It is estimated that this revision will eliminate the need to remove/install insulation and scaffolding for 10 bolted connections for each pressurized water reactor each 10-year ISI interval and that the occupational exposure to install/remove insulation and scaffolding for each bolted connection is 0.250 person-rem. The industry's annual occupational dose cost savings would be on the order of \$34,500 (10 bolted connections X 0.250 person-rem X \$2000 X 69 units ÷ 10 years).

This rule does not increase the probability or consequences of accidents, does not involve a significant increase in the amounts or types of any effluents that may be released off site, and does not significantly increase occupational or public radiation exposures. Therefore, no significant radiological environmental impacts are associated with these changes. The rule changes do not involve non-radiological plant effluents and have no other environmental impact. Therefore, no significant non-radiological environmental impacts are associated with this rulemaking.

Alternatives to the Action

As required by Section 102(2)(E) of the NEPA (42 U.S.C.A. 4332(2)(E)), the NRC has considered possible alternatives to this action. The staff considered the following alternatives for the this rulemaking:

Alternative 1 - Take No Action

Most environmental assessments include a *status quo* option for the Commission's consideration; in this case, this would be considered a non-rulemaking alternative. However, the staff does not recommend that the Commission consider this alternative because the

alternative conflicts with the instructions in a staff requirements memorandum dated April 13, 2000, directing the staff to continue the NRC's longstanding policy of updating § 50.55a to incorporate by reference newer editions and addenda to the ASME BPV and OM Code.

Alternative 2 - Incorporate by Reference a Later Edition and Addenda of the ASME Code

Alternative 2 consists of continuing the NRC's longstanding policy of periodically updating 10 CFR 50.55a to incorporate by reference newer editions and addenda to the ASME BPV and OM Code. This alternative provides a sound regulatory basis for NRC's approval of the generic use of a voluntary consensus standard that provides updated provisions for design, construction, and ISI of pressure boundary components and testing of pumps and valves in nuclear power plants. The staff will continue to prepare periodic rulemakings to keep the regulations current with the latest versions of the ASME BPV Code and OM Code.

Pursuing this alternative meets the NRC goal of maintaining safety by continuing to provide NRC approval of newer editions and addenda of the ASME BPV and OM Code. The rulemaking does not change NRC's requirements in a significant manner. The amendment, as delineated above, is expected to maintain the overall protection of public health and safety while updating the rules to be consistent with the latest methods for construction, ISI, and IST specified by the ASME Code. The NRC endorsement of more recent ASME Code editions and addenda should also increase public confidence as a result of the use of the most up-to-date technologies and methods for design, construction, ISI, and IST of nuclear power plants components. It also reduces unnecessary regulatory burden by eliminating the need for licensees to submit plant-specific relief requests and for NRC to review those submittals. Licensees' requests to use alternatives to the Code requirements would be eliminated in cases where the new edition and addenda that the licensee is updating to have been revised to eliminate the need for the request.

Alternative 3 - Discontinue the Use of the ASME Consensus Standard

Under this alternative, the staff would discontinue the use of the industry consensus standard developed by the ASME as a regulation for the design, construction, and inservice inspection of pressure boundary components and testing of pumps and valves in nuclear power plants. This alternative would require that staff develop a new separate regulation to be used in place of the editions and addenda of the ASME BPV and OM Code. However, the staff does not recommend that the Commission consider this alternative because this alternative is inconsistent with the National Technology Transfer and Advancement Act of 1995, which requires the use technical standards that are developed or adopted by voluntary consensus standards bodies unless the agency finds that the use of an industry consensus standard is contrary to law or impracticable. Furthermore, the staff is not aware of any other national or international consensus standard that could be endorsed as an option to the ASME BPV and OM Code. The development of this alternative regulation would require a significant amount of staff resources over what is currently in the budget plan and would also be required to be justified in accordance with the backfitting requirements in 10 CFR 50.109.

Agencies and Persons Consulted

The NRC requested the views of the States on the environmental assessment for this rule. The States had no comments. The NRC staff developed this rule and environmental assessment.

Finding of No Significant Impact

On the basis of this environmental assessment, the Commission concludes that this action will not have a significant effect on the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for this action.