

### Paperwork Reduction Act

This proposed rule contains no information collection or recordkeeping requirements under the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*).

#### List of Subjects in 9 CFR Part 94

Animal diseases, Imports, Livestock, Meat and meat products, Milk, Poultry and poultry products, Reporting and recordkeeping requirements.

Accordingly, 9 CFR part 94 would be amended as follows:

#### PART 94—RINDERPEST, FOOT-AND-MOUTH DISEASE, FOWL PEST (FOWL PLAGUE), VELOGENIC VISCEROTROPIC NEWCASTLE DISEASE, AFRICAN SWINE FEVER, HOG CHOLERA, AND BOVINE SPONGIFORM ENCEPHALOPATHY: PROHIBITED AND RESTRICTED IMPORTATIONS

1. The authority citation for part 94 would continue to read as follows:

**Authority:** 7 U.S.C. 147a, 150ee, 161, 162, and 450; 19 U.S.C. 1306; 21 U.S.C. 111, 114a, 134a, 134b, 134c, 134f, 136, and 136a; 31 U.S.C. 9701; 42 U.S.C. 4331, and 4332; 7 CFR 2.17, 2.51, and 371.2(d).

#### § 94.0 [Amended]

2. In § 94.0, the definition for *Game birds* would be amended by adding “, and wild turkeys” immediately following the word “pheasants”.

3. In § 94.0, the definition for *Poultry* would be amended by removing “turkeys,” immediately following “Chickens,” and adding “turkeys,” immediately following “pen-raised”.

Done in Washington, DC, this 13th day of February 1995.

**Lonnie J. King,**

*Acting Administrator, Animal and Plant Health Inspection Service.*

[FR Doc. 95-4178 Filed 2-17-95; 8:45 am]

BILLING CODE 3410-34-P

### NUCLEAR REGULATORY COMMISSION

#### 10 CFR Chapter I

#### Issuance of Report on the NRC Regulatory Agenda

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Issuance of NRC Regulatory Agenda.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) has issued the NRC Regulatory Agenda for the period covering July through December, of

1994. This agenda provides the public with information about NRC's rulemaking activities. The NRC Regulatory Agenda is a compilation of all rules on which the NRC has recently completed action, or has proposed action, or is considering action, and of all petitions for rulemaking that the NRC has received that are pending disposition. Issuance of this publication is consistent with Section 610 of the Regulatory Flexibility Act.

**ADDRESSES:** A copy of this report, designated NRC Regulatory Agenda (NUREG-0936), Vol. 13, No. 3, is available for inspection, and copying for a fee, at the Nuclear Regulatory Commission's Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC.

In addition, the U.S. Government Printing Office (GPO) sells the NRC Regulatory Agenda. To purchase it, a customer may call (202) 512-2249 or write to the Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082.

**FOR FURTHER INFORMATION CONTACT:** Michael T. Lesar, Chief, Rules Review Section, Rules Review and Directives Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-7163, toll-free number (800) 368-5642.

Dated at Rockville, Maryland, this 1st day of February 1995.

For the Nuclear Regulation Commission.

**Michael T. Lesar,**

*Acting Chief, Rules Review and Directives Branch, Division of Freedom of Information and Publications Services, Office of Administration.*

[FR Doc. 95-4168 Filed 2-17-95; 8:45 am]

BILLING CODE 7590-01-M

#### 10 CFR Part 50

RIN 3150-AF00

#### Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission is proposing to amend its regulations to provide a performance-based option for leakage rate testing of containments of light-water-cooled nuclear power plants. This option will be available for voluntary adoption by licensees, in lieu of compliance with the

current prescriptive requirements contained in the current regulation. This action is aimed at improving the focus of the regulations by eliminating prescriptive requirements that are marginal to safety. The proposed rule would allow test intervals to be based on system and component performance, and provide licensees greater flexibility for cost-effective implementation methods of regulatory safety objectives.

**DATES:** Submit comments by May 8, 1995. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

**ADDRESSES:** Send comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555. ATTN: Docketing and Service Branch.

Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland, between 7:45 a.m. and 4:15 p.m. Federal workdays.

Comments may be submitted electronically, in either ASCII text or Wordperfect format (version 5.1 or later), by calling the NRC Electronic Bulletin Board on FedWorld. The bulletin board may be accessed using a personal computer, a modem, and one of the commonly available communications software packages, or directly via Internet. Background documents on the rulemaking are also available for downloading and viewing on the bulletin board.

If using a personal computer and modem, the NRC subsystem on FedWorld can be accessed directly by dialing the toll free number: 1-800-303-9672. Communication software parameters should be set as follows: Parity to none, data bits to 8, and stop bits to 1 (N,8,1). Using ANSI or VT-100 terminal emulation, the NRC rulemaking subsystems can then be accessed by selecting the “Rules Menu” option from the “NRC Main Menu.” For further information about options available for NRC at FedWorld consult the “Help/Information Center” from the “NRC Main Menu.” Users will find the “FedWorld Online User's Guides” particularly helpful. Many NRC subsystems and databases also have a “Help/Information Center” option that is tailored to the particular subsystem.

The NRC subsystem on FedWorld can also be accessed by a direct dial phone number for the main FedWorld BBS: 703-321-8020; Telnet via Internet: fedworld.gov (192.239.93.3); File Transfer Protocol (FTP) via Internet: ftp.fedworld.gov (192.239.92.205); and World Wide Web using: http://

www.fedworld.gov (this is the Uniform Resource Locator (URL)).

If using a method other than the toll free number to contact FedWorld, then the NRC subsystem will be accessed from the main FedWorld menu by selecting the "F—Regulatory, Government Administration and State Systems," then selecting "A—Regulatory Information Mall". At that point, a menu will be displayed that has an option "A—U.S. Nuclear Regulatory Commission" that will take you to the NRC Online main menu. You can also go directly to the NRC Online area by typing "/go nrc" at a FedWorld command line. If you access NRC from FedWorld's main menu, then you may return to FedWorld by selecting the "Return to FedWorld" option from the NRC Online Main Menu. However, if you access NRC at FedWorld by using NRC's toll-free number, then you will have full access to all NRC systems, but you will not have access to the main FedWorld system. For more information on NRC bulletin boards call Mr. Arthur Davis, Systems Integration and Development Branch, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 415-5780; e-mail AXD3@nrc.gov.

Examine comments received, the draft environmental assessment and findings of no significant impact, and the draft regulatory analysis at: The NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; phone (202) 634-3273; fax (202) 634-3343. Copies of the documents may be obtained from the PDR for a fee. These documents may also be viewed and downloaded electronically via the Electronic Bulletin Board established by NRC for this rulemaking.

The NRC also requests public comment on Draft NUREG-1493, "Performance-Based Containment Leak Test Program." A free single copy of draft NUREG-1493 may be requested by written request to the U.S. Nuclear Regulatory Commission, ATTN: Distribution Section, Room P1-37, Washington, DC 20555; fax (301) 504-2260. Comments on draft NUREG-1493 may be submitted to: Chief, Rules Review and Directives Branch, Division of Freedom of Information and Publication Services, Mail Stop T-6D59, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Hand deliver comments on draft NUREG-1493 to 11545 Rockville Pike, Maryland between 7:45 a.m. and 4:15 p.m. on Federal workdays. Comments on draft NUREG-1493 may be submitted

electronically as indicated above under the ADDRESSES heading.

**FOR FURTHER INFORMATION CONTACT:** Dr. Moni Dey, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 415-6443, e-mail mkd@nrc.gov

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

The NRC is proposing to amend 10 CFR part 50, appendix J in an effort to relax and allow alternatives to those requirements that are prescriptive and marginal to safety and yet impose a significant regulatory burden on licensees. NRC reactor licensees are required currently to conduct periodic primary reactor containment leakage testing in accordance with 10 CFR part 50, appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." Appendix J is currently prescriptive in that it specifies leak test frequencies, pretest requirements, test methods, and reporting requirements.

##### **NRC's Marginal to Safety/Regulatory Improvement Program**

In 1984, the NRC staff initiated a program to make regulatory requirements more efficient by eliminating those with marginal impact on safety. The NRC's initiative to eliminate requirements marginal to safety recognizes both the dynamic nature of the regulatory process and that the importance and safety contribution of some existing regulatory requirements may not have been accurately predicted when adopted or may have diminished with time. The availability of new technical information and methods justify a review and modification of existing requirements.

The NRC solicited comments from industry on specific regulatory requirements and associated regulatory positions that needed reevaluation. The Atomic Industrial Forum conducted a survey providing most of industry's input, published for the NRC as NUREG/CR-4330<sup>1</sup>, "Review of Light Water Reactor Regulatory Requirements," Vol. 1, April 1986. A list of 45 candidates for potential regulatory modification were identified.

<sup>1</sup> Copies of NUREGs may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013/7082. Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. A copy is available for inspection and/or copying in the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

The NRC's review of the list selected Appendix J as one of seven areas requiring further analysis (NUREG/CR-4330, Vols. 2 and 3, dated June 1986 and May 1987). The NRC also conducted a survey of its staff concerning their expertise in a particular area, experience in regulation, and knowledge of regulatory requirements. The NRC staff survey identified 54 candidates, a number of which were previously identified in the earlier survey. The NRC's assessment of this list also selected appendix J as a potential candidate for modification.

The NRC published in the **Federal Register**, for comment, a proposed revision to appendix J on October 29, 1986 (51 FR 39538) to update acceptance criteria and test methods based on experience in applying the existing requirements and advances in containment leak testing methods, resolve interpretive questions, and reduce the number of exemption requests. The October 29, 1986, proposed rule is being withdrawn from further consideration and a more comprehensive proposed rule that accounts for the latest technical information and regulatory framework is being proposed.

The NRC's Marginal-to-Safety initiative is part of a broader NRC initiative for regulatory improvement. Through its Program for Regulatory Improvement, the NRC has institutionalized an ongoing effort to eliminate requirements marginal to safety and to reduce regulatory burden. The NRC staff's plan in SECY-94-090, dated March 31, 1994, which satisfies the recent requirement for a periodic review of existing regulations in Executive Order 12866 of September 30, 1993, was approved by the Commission on May 18, 1994. The Regulatory Improvement Program is aimed at the fundamental principle adopted by the Commission that all regulatory burdens must be justified and that its regulatory process must be efficient. In practice, this means the elimination or modification of requirements where burdens are not commensurate with their safety significance. The activities of the Regulatory Improvement Program should result in enhanced regulatory focus in areas that are more safety significant. As a result, an overall net increase in safety is expected from the program.

The Regulatory Improvement Program will include, whenever feasible and appropriate, the consideration of performance-oriented and risk-based approaches. The program will review requirements or license conditions that are identified as a significant burden on

licensees. If review and analysis find that the requirements are marginal to safety, they would be eliminated or relaxed. By performance-oriented, the NRC means establishing regulatory objectives without prescribing the methods or hardware necessary to accomplish the objective, and allowing licensees the flexibility to propose cost-effective methods for implementation. By risk-based, the NRC means regulatory approaches that use probability risk analysis (PRA) as the systematic framework for developing or modifying requirements.

The present rulemaking is part of this overall effort and initiative for eliminating requirements that are marginal to safety and is guided by the policies, framework and criteria for the program.

The NRC published a notice in the **Federal Register** on February 4, 1992 (57 FR 4166), presenting its conclusion that appendix J was a candidate whose requirements may be relaxed or eliminated based on cost-benefit considerations. On the basis of NRC staff analyses of public comments on the proposal, the Commission approved and announced on November 24, 1992 (57 FR 55156) its plans to initiate rulemaking for developing a performance-oriented and risk-based regulation for containment testing requirements. On January 27, 1993, (58 FR 6196) the NRC staff published a general framework for developing performance-oriented and risk-based regulations and, at a public workshop on April 27 and 28, 1993, invited discussions of specific proposals for modifying containment testing requirements. Industry and public comments on the proposals, and other recommendations and innovative ideas raised at the public workshop, were documented in the proceedings of the workshop (NUREG/CP-0129, September 1993). Specifically, the NRC concluded that the allowable containment leakage rate utilized in containment testing may be increased and other Appendix J requirements need not be as prescriptive as the current requirements. To increase flexibility, the detailed and prescriptive technical requirements contained in appendix J regulations could be improved and replaced with performance-based requirements and supporting regulatory guides. The regulatory guides would allow alternative approaches, although compliance with current existing regulatory requirements would continue to be acceptable. The performance-based requirements would reward superior operating practices.

### **Performance-Based Regulatory Approach**

In institutionalizing the Regulatory Improvement program and adopting a performance-based regulatory approach, the NRC has formulated the following framework for revisions to its regulations:

(1) The new performance-based regulation will be less prescriptive and allow licensees flexibility to adopt cost-effective methods for implementing the safety objectives of the original rule.

(2) The regulatory safety objectives will be derived, to the extent feasible and practical, from risk considerations with appropriate consideration of uncertainties, and will be consistent with the NRC's Safety Goals.

(3) Detailed technical methods for measuring or judging the acceptability of a licensee's performance relative to the regulatory safety objectives will be, to the extent practical, provided in industry standards and guidance documents which are endorsed in NRC regulatory guides.

(4) The new regulation will be optional for current licensees so that licensees can decide to remain in compliance with current regulations.

(5) The regulation will be supported by necessary modifications to, or development of, the full body of regulatory practice including, for example, standard review plans, inspection procedures, guides, and other regulatory documents.

(6) The new regulation will be formulated to provide incentives for innovations leading to improvements in safety through better design, construction, operating, or maintenance practices.

### **Current Appendix J Requirements**

Appendix J to 10 CFR part 50, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," became effective on March 16, 1973. The regulatory safety objective of reactor containment design is stated in 10 CFR part 50, appendix A, "General Design Criteria for Nuclear Power Plants," Criterion No. 16, "Containment Design." GDC Criterion 16 mandates "an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment \* \* \*" for postulated accidents. Appendix J to 10 CFR part 50 implements, in part, General Design Criterion No. 16 and specifies containment leakage testing requirements, including the types of tests required. For each type of test required, Appendix J specifies how the tests should be conducted, the frequency of testing, and reporting

requirements. Appendix J requires the following types of containment leak tests:

(1) Measurement of the containment integrated leak-rate (Type A tests, often referred to as ILRTs).

(2) Measurement of the leak-rate across each pressure-containing or leakage-limiting boundary for various primary reactor containment penetrations (Type B tests).

(3) Measurement of the containment isolation valves leak-rates (Type C tests).

Type B and C tests are referred to as local leak-rate tests (LLRTs).

### *Leak-Tightness Requirements*

Compliance with 10 CFR part 50, appendix J, requirements is determined by comparing the measured containment leak-rate with the maximum allowable leak rate. Maximum allowable leak-rates are calculated in accordance with 10 CFR Part 100, "Reactor Site Criteria," and are incorporated into the technical specifications. Typical allowable leak-rates are 0.1 percent of containment volume per day for pressurized water reactors (PWRs) and one volume percent per day for boiling water reactors (BWRs).

### *Test Frequency Requirements*

Schedules for conducting containment leak-rate tests are specified in appendix J for both preoperational and periodic tests. Periodic leak-rate tests schedules are as follows:

*Type A Tests.* (1) After the preoperational leak-rate test, a set of three Type A tests must be performed at approximately equal intervals during each 10-year service period. The third test of each set must be conducted when the plant is shutdown for the 10-year plant in-service inspection.

(2) The performance of Type A tests must be limited to periods when the plant facility is nonoperational and secured in the shutdown condition under the administrative control and in accordance with the safety procedures defined in the license.

(3) If any periodic Type A test fails to meet the applicable acceptance criteria, the test schedule applicable to subsequent Type A tests will be reviewed and approved by the Commission. If two consecutive periodic Type A tests fail to meet the applicable acceptance criteria, a Type A test must be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria, after which time the regular retest schedule may be resumed.

*Type B Tests.* (1) Except for airlocks, Type B tests must be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years. If opened following a Type A or B test, containment penetrations subject to Type B testing must be tested prior to returning the reactor to an operating mode requiring containment integrity. For primary reactor containment penetrations employing a continuous leakage monitoring system, Type B tests, except for tests of airlocks, may be performed every other reactor shutdown for refueling but in no case at intervals greater than 3 years.

(2) Airlocks must be tested prior to initial fuel loading and at 6-month intervals thereafter. Airlocks opened during periods when containment integrity is not required by the plant's technical specifications must be tested at the end of such periods. Airlocks opened during periods when containment integrity is required by the plant's technical specifications must be tested within 3 days after being opened. For airlock doors opened more frequently than once every 3 days, the airlock must be tested at least once every 3 days during the period of frequent openings. For airlock doors having testable seals, testing the seals fulfills the 3-day test requirement. Airlock door seal testing must not be substituted for the 6-month test of the entire airlock at not less than  $P_a$ , the calculated peak containment pressure related to the design basis accident.

*Type C Tests.* Type C tests must be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years.

There have been two amendments to this appendix since 1973. The first amendment published September 22, 1980 (45 FR 62789), modified the Type B penetration test requirements to conform to what had become accepted practice through the granting of exemptions. The second amendment published November 15, 1988 (53 FR 45890) incorporated the Mass Point statistical analysis technique as a permissible alternative to the Total Time and Point-to-Point techniques specified in appendix J.

#### European Experience

A combination of Type A tests and an on-line monitoring (OLM) capability is being actively pursued in Europe, notably in France and Belgium, and is currently being considered in Sweden. OLM is used to identify a "normal" containment pressurization pattern and to detect deviations from that pattern. The Belgians conduct a leak test using

OLM during reactor operation after each cold shutdown longer than 15 days with the objective of detecting gross leaks. The objective of the Belgian approach to Type A testing is to reduce the frequency and duration of the tests. The Type A test is conducted at a containment pressure ( $P_t$ ) not less than half of the peak pressure ( $0.5 P_a$ ). It is performed once every 10 years.

In France, containment leaktightness is being continuously monitored during reactor operation in all of the French PWR plants using the SEXTEN system. It is also being evaluated by the Swedes for their PWR units. Leaks may be detected during the positive or negative pressure periods in the containment by evaluating the air mass balance in the containment. Type A tests are conducted at containment peak pressure (loss-of-coolant accident pressure) before initial plant startup, during the first refueling, and thereafter every 10 years unless a degradation in containment leak-tightness is detected. In that case, tests are conducted more frequently.

Further details of European approaches to containment testing is provided in Draft NUREG-1493.

#### Advance Notices for Rulemaking and Public Comments

Over time, it has become apparent that variations in plant design and operation frequently make it difficult to meet some of the requirements contained in appendix J because of its prescriptive nature. Economic and occupational exposure costs are directly related to the frequency of containment testing. Containment integrated leak rate tests (Type A) preclude any other reactor maintenance activities and thus are on the critical path for return to service from reactor outages. In addition to the costs of the tests, integrated leak tests impose the added burden of the cost of replacement power. Containment penetration leak tests (Type B and C) can be conducted during reactor shutdowns in parallel with other activities and thus tend to be less costly; however, the large number of penetrations impose a significant burden on the utilities. Additionally, risk assessments performed to date indicate that the allowable leak rate from containments can be increased, and that control of containment leakage

at the current low rates is not as risk significant as previously assumed.<sup>2 3</sup>

#### Initial NRC Proposal

In August of 1992, the Commission initiated a rulemaking to modify appendix J to make it less prescriptive and more performance-oriented. The Commission also initiated a plan to relax the allowable containment leak-rate utilized to define performance standards for containment tests. In the **Federal Register** published on January 27, 1993 (58 FR 6196), the NRC indicated the following potential modifications to appendix J of 10 CFR part 50 would be considered:

(1) Increase allowable containment leak-rates based on Safety Goals and PRA technology (i.e., define a new performance standard).

(2) Modify appendix J to be a performance-based regulation:

A Limit the revised rule to a new regulatory objective: In order to ensure the availability of the containment during postulated accidents, licensees should either:

(i) Test overall containment leakage at intervals not longer than every 10 years, and test pressure-containing or leakage-limiting boundaries and containment isolation valves on an interval based on the performance history of the equipment; or

(ii) Provide on-line (i.e., continuous) monitoring of containment isolation status.

B Remove prescriptive requirements from appendix J and preserve useful portions as guidance in a NRC regulatory guide.

C Endorse industry standards on:

(i) Guidance for calculating plant-specific allowable leak-rates based on new NRC performance standard;

(ii) Guidance on the conduct of containment tests; and

(iii) Guidance for on-line monitoring of containment isolation status.

<sup>2</sup>Severe Accident Risks: An assessment for five U.S. Nuclear Power Plants, Final Summary Report." NUREG-1150, December 1990. Copies of NUREGs may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013/7082. Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. A copy is available for inspection and/or copying in the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

<sup>3</sup>Performance-Based Containment Leak Test Program." Draft NUREG-1493, January 1995. A free single copy of draft-1493 may be requested by those considering public comment by writing to the U. S. Nuclear Regulatory Commission, ATTN: Distribution Section, Room P1-37, Washington, DC 20555. A copy is also available for inspection and/or copying in the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC 20555.

D Continue to accept compliance with the current detailed requirements in appendix J (i.e., licensees presently in compliance with Appendix J will not need to do anything if they do not wish to change their practice).

A public workshop on the subject was held by the NRC on April 27 and 28, 1993.<sup>4</sup>

### Public Comments and Issues

Listed below are the categories of relevant issues identified by the public, the nuclear industry, and the NRC at the public workshop and in response to earlier solicitations for comments on this rulemaking, and a summary of interests expressed. Summaries of individual comments earlier solicitations were published on November 1992 (57 FR 55156). The comments at the public workshop are documented in NUREG/CP-0129, September 1993. The comments are available for inspection in the NRC Public Document Room.

1. Is there a continuing need for this regulation?

Most commenters agree that there is a continuing need for a regulation on containment leak testing. While some commenters believe the regulation should be tightened, most commenters believe appendix J requirements should be relaxed. Industry representatives presented a wealth of data on the cost and benefits of containment leak testing.

2. Should the NRC replace appendix J to 10 CFR part 50, "Primary Reactor Containment Leak Testing for Water-Cooled Power Reactors," with a non-prescriptive, performance-based rule?

One commenter believed that using conservatism that may far exceed performance-based regulations is in the public's interest. Some misallocation of resources does exist that could be corrected, although there may be varying opinions concerning where they are. One commenter believed that, from a public perception viewpoint, there would be dissatisfaction with changing to performance-based regulation. It appears to represent a streamlining or deregulation of standards. Another view held that because there is no consistent regulatory basis, there are inconsistencies in regulation.

Performance-based regulations would get rid of these inconsistencies. A move to performance-based regulations would uncover marginal requirements. Performance-based requirements would depend on the functional importance of a component and might include

deterministic performance standards for components. A component that did not meet the performance standard would be rejected. Another view was that the industry can use increased knowledge about reactors and regulations within the existing technology to improve the regulations and reduce risk, without relying on risk assessments. This approach might result in earlier benefits. Industry generally encouraged the NRC to proceed with its initiative to decrease the prescriptiveness of its regulations and adopt more performance-based approaches.

3. Should the NRC increase allowable containment leakage rates?

Some commenters believe that the existing appendix J requirements for allowable leakage should not be relaxed and, based on their interpretation of NUREG/CR-5747, "Estimate of Radionuclide Releases Characteristics into Containment Under Severe Accident Conditions," suggests that more stringent leakage limits, not relaxation of these requirements, is appropriate. Because the current leakage rates specified in plant technical specifications are based on relatively conservative assumptions, the majority of commenters believe that a more realistic representation of loss-of-coolant accidents should be used to calculate dose to the public. These commenters believe that more realistic accident scenarios would support a relaxation in the containment leak-rate.

4. Should the NRC decrease Type A, B, and C test frequencies?

While some commenters had opinions on proper test frequencies, and most believed that test frequencies could be relaxed, overall, the technical community believed that examination of the technical data and the objectives of the test should be used to determine the appropriate test frequency. One commenter believed that both increased and decreased frequencies might be appropriate. For example, tests might be increased in frequency for valves that play a risk-significant role, and test interval or allowable leak-rate could be increased for less important components.

5. Can the new rule and its implementation yield an equivalent level of, or only have a marginal impact on, safety?

Most commenters believe that a move to performance-based regulations would uncover marginal requirements. Some believe that by conserving resources in areas where safety is not a significant issue, more resources can be devoted to more risk-significant areas with a net increase in the overall safety margin.

6. Can the regulatory/safety objective (qualitative or quantitative) be established in an objective manner to allow a common understanding between licensees and the NRC on how the performance or results will be measured or judged?

Several commenters believe that the regulatory process should integrate deterministic, risk-based, and performance-based regulation and allow for case-specific evaluation, with a goal of protecting the health and safety of the public and at the same time minimizing the cost to the licensee. Others believe that the opinions of public interest groups should also be sought in deriving safety goals/objectives. Overall, no comments were presented that would suggest that a common understanding could not be achieved on goals and performance measurements.

7. Can the regulation and implementation documents be developed in such a manner that they can be objectively and consistently inspected and enforced against?

Several commenters believe that the regulations should be performance-based and the associated guidance documents should be prescriptive so that only the guidance documents not the regulations will need to be changed as more information is gained on compliance issues. Many commenters believe that PRAs should not be the sole basis for regulatory decisions due to the uncertainty in their results; however, if the results indicate that a particular requirement has a contribution to risk significantly below the Safety Goal thresholds, the PRA information should be considered sufficient to justify elimination of the requirement as marginal to safety.

### Proposed Revision

Based on several advance notices for rulemaking and significant public comment and discussion, risks and costs evaluated, and consideration of which modifications are feasible and practical at this time, the NRC proposes two phases for modifications of requirements to containment leakage testing. The first phase, for which modifications are proposed in this notice, will allow leak-rate testing intervals to be based on the performance of the containment system structures and components. The second phase will further examine the needed requirements of the containment function (i.e. structural and leak-tight integrity of containment system structures and components, and prevention of inadvertent bypass), and include consideration of the potential of on-line monitoring of containment

<sup>4</sup> "Workshop on Program for Elimination of Requirements Marginal to Safety." NUREG/CP-0129, September 1994.

integrity to verify certain functions. Solicitation of public comments to guide this future work is included later in this notice.

The rule proposed in this notice would apply to all NRC licensees who operate light water power reactors. The proposed rule would allow licensees the option of continuing to comply with the current appendix J or to adopt the new performance-based standards.

The NRC's analyses are based upon the insight gained through the use of probability risk assessment techniques and the significant data base of practical, hands-on operating experience gained since appendix J was promulgated in 1973. This operating experience provides hard evidence of the activities necessary to conduct appendix J testing, and the costs of those activities both in monetary terms and occupational radiation exposure.

The results of the present effort documented in draft NUREG-1493, which are based on NUREG-1150, confirm previous observations of insensitivity of population risks from severe reactor accidents to containment leak-rates.

The current appendix J requirements have achieved the regulatory criteria of assuring an essentially leak-tight boundary between the power reactor system and the external environment (GDC Criterion 16). Costs associated with complying with current appendix J requirements are estimated to be \$165,000 for a complete battery of Type B/C tests and \$1,890,000 for Type A tests. Over the average reactor's remaining lifetime of 20 years, the present value of all remaining leak testing at a five percent discount rate is about \$7 million per reactor. Estimates of the remaining industry-wide costs of implementing current appendix J requirements range from \$720 to \$1,080 million, approximately 75 percent of which could be averted with a performance-based rule.

The present study found that by allowing requirements with marginal effect on safety, but which impose a significant cost on licensees, to remain in effect is to essentially misallocate a portion of the NRC's and the industry's resources on activities for which there is no commensurate return in safety. The real cost then may be in a missed opportunity to focus NRC and licensee efforts to areas where the return in terms of added public safety is higher.

Specific alternatives for modifying the current appendix J were identified by the public in response to the NRC's **Federal Register** notice published on January 27, 1993 (58 FR 6196). Those whose characteristics matched the

NRC's established criteria for the marginal to safety program were selected for further review.

### Modifications of Initial Proposals

#### *Allowable Leakage Rate*

The NRC had initially planned to establish, by rulemaking, a risk-based allowable leak-rate commensurate with its significance to total public risk. Specific findings from draft NUREG-1493 on the allowable leakage rate include:

1. Allowable leakage can be increased approximately two orders of magnitude (100-200 fold) with marginal impact on population dose estimates from reactor accidents.

2. Calculated mean population risks are several orders of magnitude below the NRC's Safety Goals for all reactors considered, but the tail of the distribution can approach Safety Goals.

3. Increases in the allowable leak-rate is estimated to have a negligible impact on occupational exposure.

Relaxing the allowable leak-rate is estimated to reduce future industry testing costs by \$50 to \$110 million, a ten percent decrease in overall leak-rate testing costs.

A risk-based allowable leakage rate would be based on an evaluation, using PRA, of the sensitivity and significance of containment leakage to risk, and determining an appropriate containment leakage limit commensurate with its significance to the risk to the public and plant control room operators. However, this would entail a major change in policy and restructuring of the current licensing basis and a more complete understanding of the uncertainties associated with the threat of severe accidents to the containment, and therefore, the NRC plans to consider a modification of the performance standard (allowable leakage level) in the second phase separate from modifications of testing requirements. This modification will be part of a broader effort to further examine the risk significance of various attributes of containment performance, i.e. structural and leak-tight integrity of containment system structures and components, and inadvertent bypass.

#### *On-Line Monitoring (OLM) Systems*

Currently, there is no requirement for OLM systems which monitor the containment to detect unintentional breaches of containment integrity.

Studies discussed in draft NUREG-1493, "Performance-Based Containment Leak Test Program," find that, based on operating experience, OLM would not significantly reduce the risk to the

public from nuclear plant operation and, thus, cannot be justified solely on risk-based considerations. Specific findings include:

1. Continuous monitoring methods that exist appear technically capable of detecting leaks in reactor containments within 1 day to several weeks. OLM systems are in use or planned in several European countries.

2. OLM systems are only capable of detecting leaks in systems that are open to the containment atmosphere during normal operation (approximately ten percent of the mechanical penetrations).

3. The technical and administrative objectives of OLM systems and Type A tests are different.

4. OLM cannot be considered as a complete replacement for Type A tests because it cannot challenge the structural and leak-tight integrity of the containment system at elevated pressures.

5. Analysis of the history of operating experience indicates limited need for, and benefit of, OLM in the U.S.

Although OLM cannot be justified solely based on risk considerations, a plant already possessing such a system has greater assurance of achieving certain attributes of containment integrity. Therefore, OLM systems could contribute towards an overall leakage monitoring scheme. Some capability for on-line monitoring already exists as a byproduct of specific containment designs. For example, licensees with inerted BWR containments, or subatmospheric PWR containments, would readily detect gross leakages that develop during normal operation.

Given that the application of on-line monitoring is specific to containment design, and generic application cannot be justified solely on risk considerations, the NRC does not propose a requirement for OLMs. However, licensees which already have such a capability (e.g. inerted BWR containments, and subatmospheric PWR containments) are encouraged to propose plant-specific application of such a capability, including credit for any added assurance for certain attributes of containment integrity provided by such a system compared to other testing methods. The NRC will reconsider the role of OLM in the second phase of modifications in this area along with the allowable leakage rate.

#### **Proposed Modification of Type A, B, C Test Intervals**

The NRC proposes at this time, for the first phase of modifications, to define a new risk-based regulation by utilizing the performance history of components

(containment, penetrations, valves) as the means to justify an increase in the testing interval for Type A, B, and C tests. The revised regulation would require tests to be conducted on an interval based on the performance of the containment structure, penetration or valves without specifying the interval in the regulation. Currently, three Type A tests are conducted in every 10 year period. Type B (except airlocks, which are tested more frequently) and C tests are conducted on a frequency not to exceed 2 years.

The NRC proposes to base the frequency of Type A tests (ILRTs) on the historical performance of the overall containment system. Specific findings documented in draft NUREG-1493 that justify the proposal include:

1. The fraction of leakages detected only by ILRTs is small, on the order of a few percent.

2. Reducing the frequency of ILRT testing from three per 10 years to one per 10 years leads to a marginal increase in risk.

3. ILRTs also test the strength of the containment structure. No alternative to ILRTs have been identified to provide assurance that the containment structure will meet allowable leakage rates during design-basis accidents.

4. At a frequency of one test per 10 years, industry-wide occupational exposure would be reduced by 0.087 person-sievert (8.7 person-rem) per year.

Based on specific, detailed analyses of data from the North Anna and Grand Gulf plants and data from twenty-two nuclear plants (see draft NUREG-1493), performance-based alternatives to current LLRT methods are feasible with marginal impact on risk. Specific findings that justify the proposal include:

1. Type B and C tests detect a very large fraction, over 97 percent of containment leakages.

2. Of the 97%, virtually all leakages are identified by LLRTs of containment isolation valves (Type C tests).

3. Based on the detailed evaluation of the experience of a single 2-unit station, no correlation of failures with type of valve or plant service could be found.

4. For the 20 years of remaining operations, changing the Type B/C test frequency alone is estimated to reduce industry-wide occupational exposure by 0.72 person-sievert (72 person-rem) per year. If 20-year license extension is assumed, the estimate is 0.75 person-sievert (75 person-rem) per year.

Reducing the frequency of ILRTs will reduce future industry testing costs by approximately \$330 to \$660 million if tests are conducted once per 10 years versus the current three per ten years.

These savings represent about 65 percent of the remaining costs of current appendix J requirements. Performance-based LLRT alternatives are estimated to reduce future industry testing costs by \$40 million to \$55 million. These savings represent about five percent of the total remaining costs of appendix J testing.

Therefore, based on the risks and costs evaluated, and other considerations discussed above, a performance-based appendix J which encompasses the following principles which differ moderately from those first described in the **Federal Register** (January 27, 1993 58 FR 6197) is proposed:

*General.* (1) Make appendix J less prescriptive and more performance-oriented; (2) Move details of appendix J tests to a regulatory guide as guidance; (3) Endorse approved industry guideline (NEI 94-01) on guidance on the conduct of containment tests in a regulatory guide. The methods for testing are contained in an industry standard (ANSI/ANS 56.8-1994) which is referenced in the NEI guideline; (4) Allow voluntary adoption of the new regulation, i.e., current detailed requirements in appendix J will continue to be acceptable for compliance with the modified rule.

*Leakage Limits.* Acknowledge the less risk-significant nature of allowable containment leakage ( $L_a$ ) but pursue its modification as a separate action.

*Type A Test Interval.* (1) Based on the limited value of integrated leak-rate tests (ILRTs) in detecting significant leakages from penetrations and isolation valves, establish the test interval based on the performance of the containment system structure; (2) The performance criterion of the test will continue to be the allowable leakage rate ( $L_a$ ); (3) The industry guideline allows extension of the Type A test interval to once every 10 years based on satisfactory performance of two previous tests; (4) In the regulatory guide, the NRC has included an exception for the extension of the interval of the general visual inspection of the containment system, and limited the interval to three times every 10 years as is current practice.

*Type B & C Test Interval.* (1) Allow local leak-rate test (LLRTs) intervals to be established based on the experience history of each component; (2) The performance criterion for the tests will continue to be the allowable leakage rate ( $L_a$ ); (3) Specific performance criteria and factors for establishing extended test intervals (up to 10 years for Type B components, and 5 years for Type C components) are contained in the regulatory guide and industry guideline.

In the regulatory guide, the NRC has included an exception to the extension of Type C test intervals up to 10 years that is proposed in the NEI industry guideline, and limited such extensions to 5-years.

### Specific Areas for Public Comment

In its preliminary criteria for developing performance-based regulations, the NRC identified three issues to be addressed by the rulemaking process as a measure of the viability of the revised rule. These issues have been addressed in the rulemaking package and the NRC is seeking further public input on them.

1. Can the new rule and its implementation yield an equivalent level of, or would it only have a marginal impact on, safety?

The present study analyzed risks to the population and to workers from changes in appendix J requirements. The results of the present analysis confirm that population risks from severe reactor accidents are not sensitive to containment leak-rates. The calculated risks are well below the Safety Goals for all of the reactors considered even at assumed containment leak-rates 100-fold above current requirements. A change in the allowable leak-rate is estimated to have a negligible impact on occupational exposure. Results also show that relaxing the frequency of Type A, B, and C tests leads to an increase in overall reactor risk of approximately two percent. This increase is considered to be marginal to safety. Due to limitations of available plant data, the uncertainties of the risk impact of extending Type C test intervals beyond sixty months needs to be addressed.

Costs associated with complying with current appendix J requirements are estimated to be \$165,000 for a complete battery of Type B/C tests, and \$1,890,000 for Type A tests. Over the average remaining lifetime of 20 years, the present value of all remaining leak testing is about \$7 million per reactor at a five percent discount rate. The estimates of remaining industry-wide costs to comply with the requirements of the current appendix J are approximately \$720 to \$1,080 million at a five percent discount rate, over 75 percent of which could be averted with a risk-based rule.

Based on the results of the present study, the NRC concludes that its safety objective for containment integrity can be maintained while at the same time reducing the burden on licensees. Thus, the new rule and its implementation can yield an equivalent level of, or only have a marginal impact on, safety.

2. Can the regulatory/safety objective (qualitative or quantitative) be established in an objective manner to allow a common understanding between licensees and the NRC on how the performance or results will be measured or judged?

Conformance to the new appendix J requirements will be measured by the adequacy of the methods for establishing the frequency of Type A, B and C testing. It is a fundamental principle of this rulemaking that changes to existing leak-test requirements be based objectively upon the performance history of components as analyzed by established methods.

To assist in the common understanding of new methods of establishing Type A, B and C test frequencies between the NRC and power reactor licensees, the NRC has had ongoing discussions with licensees. These discussions included participation in workshops designed to elicit a common understanding. From these efforts, the NRC is proposing to endorse a guidance document from industry which specifies acceptable methods for achieving compliance with Appendix J.

Further, the NRC proposes to require that plant technical specifications provide a general reference to the regulatory guide or other implementation document to ensure the prior review and approval by the NRC of licensee deviations from approved methods. This will help maintain a common understanding in the implementation of the performance-based rule, and ensure adequate basis for licensee deviations.

The NRC expects that its activities to date, the review and endorsement of a industry guideline in a regulatory guide, and the general reference of the regulatory guide in plant technical specifications, will establish regulatory safety objectives in an objective manner, and provide a common understanding on the measures of compliance.

3. Can the regulation and implementation documents be developed in such a manner that they can be objectively and consistently inspected and enforced against?

A guidance document developed by industry and approved for use by the NRC helps to ensure consistent interpretation and application of compliance requirements. As experience is gained under the new rule, adjustments may be reasonably anticipated to the industry's guidance document which will be reviewed and approved by the NRC through the regulatory guide revision process. The NRC's regulatory and inspection

personnel shall be trained in the interpretation and use of all relevant implementation documents to assure consistent enforcement.

In addition to the above, the NRC solicits comments on the following two issues.

4. Should the proposed revision be made even less prescriptive?

The proposed rule is less prescriptive than existing requirements and provides licensees with greater flexibility in the implementation of safety objectives established by NRC. This action is proposed based on substantive technical analyses presented in draft NUREG-1493. Regulatory positions were developed by the NRC through insights from probabilistic risk analyses, operating data, and deterministic engineering considerations. The NRC solicits public comment on whether this revision should make the rule even less prescriptive than proposed in this notice; and if so, how?

Specifically, comments are solicited on the potential alternative of further relaxing the test frequency requirements for the Integrated Leak Rate Tests (ILRT) by establishing a fixed ten-year interval based on generic industry data, or perhaps eliminating the tests beyond the first pre-operational test. Analyses of historical test data and risk analyses presented in draft NUREG-1493 indicate that the ILRT interval could be extended beyond the proposed ten-year interval, and perhaps eliminated after the first pre-operational test with marginal impact on safety. Leakages detected by an ILRT are rare and random, and not generally related to previous performance at a plant. However, the NRC considers that a ten-year testing interval, based on satisfactory previous plant-specific performance, is appropriate at this time. It is consistent with current industry practice for testing of pressure vessels, and should detect the potential for aging mechanisms that could affect containment leaktightness. Historical test data have not yet shown evidence of such aging mechanisms but they might develop late in life where little data exists. Comments are solicited on other benefits provided by the ILRT, in addition to determining the leakage rate, that would need to be addressed to justify further relaxations or elimination of the test. NRC's current position is guided by the desire to maintain some conservatism to address uncertainties and adopt an evolutionary approach in the modification of its requirements. However, the NRC does not wish to maintain undue conservatism in its regulations, and therefore, will consider comments received to determine the

degree of prescriptiveness, and any further relaxation of the ILRT requirements included in the final rule.

5. Should the proposed revisions be made mandatory?

The NRC is considering whether the proposed rule, which as currently proposed would provide licensees with a non-mandatory alternative to their existing appendix J containment leak testing program, should instead be adopted as a mandatory requirement for all licensees.

The proposed rule is drafted as a non-mandatory alternative to current appendix J requirements because the Staff recognized that some licensees may have technical programs which they may not wish to modify at this time, even though a proposed modification would constitute a "relaxation" from current requirements or provide other regulatory or economic benefit. For these reasons, the Commission earlier approved a Staff policy whereby any proposed revisions to existing NRC requirements developed by the Regulatory Improvement Program (See SECY-94-090, "Institutionalization of Continuing Program for Regulatory Improvement," March 31, 1994) would not be mandatory, but would be proposed as alternatives (options) to existing requirements which may be voluntarily adopted by licensees. Given the history of difficulty and low success rate for attempts to resolve new safety issues simultaneously with improvements to regulatory efficiency, the Commission also approved a Staff policy for separating regulatory actions for new safety issues from those for improving regulatory efficiency. Therefore, this proposed rule does not address any new safety issues beyond the scope of the current appendix J requirements and is not aimed at improving safety.

The NRC is interested in the public's view as to whether the proposed rule should be made mandatory, in light of the overall long-term reduction in regulatory burden on licensees and the marginal impact on safety which would be entailed in the relaxation (see previous discussion in "Proposed Modification of Type A, B, C Test Intervals). The NRC is interested in the public's views on using the increase in regulatory efficiency as a potential rationale for making the proposed rule mandatory for all licensees. The NRC also requests public comment on the underlying policy discussed above that NRC rulemakings which are not intended to increase safety, but are only intended to increase regulatory efficiency and reduce the regulatory burden imposed by the NRC's rules,

should be adopted as alternatives to existing requirements which may be voluntarily adopted by the regulated entity.

The NRC recognizes that if the proposed rule were made mandatory, that several backfitting issues are raised. These backfitting concerns are discussed in more detail in the next section on the "Backfit Rule."

### Backfit Rule

As discussed above, the Commission is considering whether the proposed rule, which is currently drafted as providing licensees with a non-mandatory alternative relaxing the requirements for and frequency of containment leakage testing, should be adopted as a mandatory requirement (that is, the requirements of the rule would be imposed on all nuclear power plant licensees). If the alternative is made mandatory, the Commission acknowledges the potential relevance of the Backfit Rule. The Commission believes that the Backfit Rule was intended to constrain the Commission's adoption of mandatory relaxations of Commission requirements, if the mandated change imposed costs upon the licensee and that such mandatory relaxations are "backfits" as defined in § 50.109(a)(1). However, the Commission believes that it has the authority and basis for "waiving" the application of the Backfit Rule to the adoption of this rulemaking. The Commission requests public comments on each of these points.

#### 1. The Proposed Rule Constitutes a "Backfit"

The current version of the Backfit Rule, 10 CFR 50.109, was adopted in substantially its current form in 1985.<sup>5</sup> 50 FR 38097 (September 20, 1985). Based upon a review of the rulemaking record which led to the final 1985 rule, the Commission's objective in adopting the Backfit Rule was to prevent the imposition of new requirements, not otherwise needed to assure adequate protection or compliance, which were of marginal overall safety benefit or involved implementation costs which were out of proportion to the safety benefits. The SOC explained that under the new backfitting standard "the Commission would not ordinarily expect that safety improvements would

be required as backfits which result in an insignificant or small benefit to the public health and safety or common defense and security, regardless of the implementation costs" (50 FR at 38102). Thus, the aim of the Backfit Rule was to instill into the regulatory process the need for disciplined analysis of proposed new requirements and regulatory initiatives (*See generally* 50 FR at 38101-38102).

The proposed revision relaxes and modifies existing requirements where the Commission believes that the burdens are not commensurate with their safety significance. Furthermore, the proposed rule does not contain any new requirements to address new safety issues not addressed in the original Appendix J rulemaking. However, if imposed as a mandatory requirement the proposed rule would mandate changes in a licensee's program for conducting containment leak rate tests, and would impose short-term costs on the licensee in order to reduce the long-term regulatory burden. However desirable such an imposition may be over the long term, it would nonetheless constitute a "backfit" as defined in § 50.109(a)(1). However, the Commission requests public comment on whether the definition of "backfit" in § 50.109(a)(1) was intended to encompass rulemakings of the type represented by this proposed rule.

#### 2. Waiving the Applicability of the Backfit Rule

The Commission adopted the Backfit Rule as a self-imposed limitation on its rulemaking authority, and under the appropriate circumstances the Commission may "waive" its applicability, subject to the Administrative Procedure Act's requirement in rulemaking for notice and opportunity for public comment. The Commission believes that it is appropriate to "waive" the applicability of the Backfit Rule to the proposed rule if its requirements were made mandatory. The purpose of the rule is to relax and modify existing containment leak rate testing requirements where burdens are not commensurate with their safety significance. It does not contain any new requirements to address new safety issues not addressed in the original appendix J rulemaking. The proposed revision would relax existing marginal-to-safety requirements in order to reduce regulatory burden on nuclear power plant licensees and increase regulatory efficiency. This type of rulemaking complements the objectives of the Backfit Rule by eliminating requirements with little or no positive impact on safety, but whose

regulatory burden is substantial. Therefore, if the Commission determines to impose the proposed rule's requirements, the Commission proposes to "waive" this rule from the requirements of the Backfit Rule.

The Commission requests public comment on the proposed rationale for "waiving" the application of the Backfit Rule to this rulemaking.

### Regulatory Guide; Issuance, Availability

A draft regulatory guide, temporarily identified by its task number DG-1037, (on the same subject) "Performance-Based Containment Leak-Test Program" is also being published for comment. The regulatory guide endorses an industry standard which contains guidance on an acceptable performance-based leak-test program, leakage rate test methods, procedures, and analyses that may be used to implement these requirements and criteria.

This draft guide is being issued to involve the public in the early stages of the development of a regulatory position in this area. It has not received complete staff review and does not represent an official NRC staff position.

Public comments are being solicited on the draft guide. Comments should be accompanied by supporting data. Specific comments are solicited on whether the regulatory guide and the industry guideline it endorses will result in a common understanding between licensees and the NRC on how performance will be measured and judged, and can be objectively inspected against. Written comments may be submitted to the Rules Review and Directives Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Comments will be most helpful if received by May 8, 1995. Comments on the draft regulatory guide may be submitted electronically as indicated elsewhere under the ADDRESSES heading.

Although a time limit is given for comments on these drafts, comments and suggestions in connection with (1) items for inclusion in guides currently being developed or (2) improvements in all published guides are encouraged at any time.

Regulatory guides are available for inspection at the Commission's Public Document Room, 2120 L Street NW., Washington, DC. Requests for single copies of draft guides (which may be reproduced and are available free to the extent of supply) or for placement on an automatic distribution list for single copies of future draft guides in specific

<sup>5</sup>The Backfit Rule was subsequently amended in 1988 (53 FR 20603, June 6, 1988) in response to a decision of the U.S. Court of Appeals for the D.C. Circuit *Union of Concerned Scientists et al. v. U.S. Nuclear Regulatory Commission*, 824 F.2d 103 which remanded the 1985 rule to the NRC because the rule failed to clearly indicate that costs may not be a consideration in determining whether there is adequate protection to the public health and safety.

divisions should be made in writing to the Office of Administration, Printing and Mail Services Section, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Telephone requests cannot be accommodated. Regulatory guides are not copyrighted, and Commission approval is not required to reproduce them. The draft regulatory guide may also be viewed and downloaded electronically via the Electronic Bulletin Board established by NRC for this rulemaking.

### Implementation

The proposed Option B to Appendix J specifies that the rule will become effective 30 days after publication. At any time thereafter, a licensee or applicant would notify the NRC of its desire to perform containment leakage rate testing according to Option B. Accompanying this notification, a licensee would submit proposed technical specifications changes which would eliminate those technical specifications which implement the current rule and propose a new technical specification referencing the NRC regulatory guide or, if the licensee desires, an alternative implementation guidance. Implementation must await staff review and approval of the licensee's proposal. The staff anticipates that a generic communication will be issued which will provide the implementation procedure to all power reactor licensees.

### Solicitation of Comments for Future Revisions

As indicated earlier in this notice, the NRC plans a second phase of modifications to requirements for containment leakage rate testing to further adopt risk-based methods, and to broadly examine the type of performance-based rule needed to ensure the adequacy of the containment function. This will include increasing the allowable leakage rate based on risk considerations, further examination of the risk significance of various attributes of containment performance (structural and leaktight integrity of containment structures and components, and inadvertent bypass), and consideration of the potential of on-line monitoring of containment integrity to address certain attributes. In order to guide this future effort, the NRC has formulated the following questions and solicits public comments on them:

1. Should NRC pursue a fundamental modification of its regulations in this area by establishing an allowable leakage rate based on risk analysis (as presented in draft NUREG-1493, Chapter 5), as compared to the current

practice of using deterministic design basis accidents and dose guidelines contained in 10 CFR part 100; or should the NRC modify the allowable leakage rate within the current licensing basis by revising source terms and updating regulatory guides (R.G.s 1.3 and 1.4)<sup>6</sup> for calculating doses to the public? What are the advantages and disadvantages of the two approaches? What are some other considerations than risk to public, e.g. plant control room habitability, that might limit the allowable leakage rate?

2. If the allowable leakage rate is increased, could on-line monitoring of containment integrity replace other current containment tests? Could the results of the on-line monitoring be used to establish a new performance basis for containment integrity involving less stringent reporting requirements if there is high assurance there are no large leakage paths in containment (> 1 in. diameter).

3. Are there any other regulatory approaches and technical methods by which the NRC can adopt a complete performance and risk basis to its regulations for containment leaktight integrity? What are some of the attributes for performance, and what risk-based methods can be used to analyze these attributes?

### Finding of No Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in subpart A of 10 CFR part 51, that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment, and therefore an environmental impact statement is not required. There will be no radiological environmental impact offsite, and the occupational exposure onsite is expected to decrease by about 0.8 person rem per year of plant operation for plant personnel if licensees adopt the performance-based testing scheme provided in the revised regulation. Alternatives to issuing this revision of the regulation were considered and found not acceptable. Single copies of the environmental assessment and finding of no significant impact can be obtained by submitting a written request to: Dr. Moni Dey, U.S.

<sup>6</sup>Copies may be purchased at current rates from the Superintendent of Documents, U. S. Government Printing Office, Mail Stop SSOP, Washington, DC 20402-9328 (telephone 202 512-2249 or 202 512-2171); or from the National Technical Information Service by writing NTIS at Port Royal Road, Springfield, VA 22161.

Nuclear Regulatory Commission, Washington, DC 20555.

### Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). This rule has been submitted to the Office of Management and Budget for review and approval of the paperwork requirements.

Because the rule will relax existing information collection requirements by providing an option to the existing requirements, the public burden for this collection of information is expected to be reduced by as much as 4583 hours per year, including the time required for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding the estimated burden reduction or any other aspect of this collection of information to the Information and Records Management Branch, T-6F33, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011), Office of Management and Budget, Washington, DC 20503.

### Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission. The draft analysis is available for inspection or copying for a fee in the NRC Public Document Room, 2120 L Street NW (Lower Level), Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; phone (202) 634-3273; fax (202) 634-3343.

The Commission requests public comment on the draft analysis. Comments on the draft analysis may be submitted to the NRC as indicated under the ADDRESSES heading.

### Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980, (5 U.S.C. 605(b)), the Commission certifies that this rule will not, if promulgated, have a significant economic impact on a substantial number of small entities. This proposed rule affects only the licensing and operation of nuclear power plants. The companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the Small Business Size Standards set

out in regulations issued by the Small Business Administration in 13 CFR part 121.

### Backfit Analysis

This proposed revision to a current regulation by the inclusion of an option that may be voluntarily adopted by licensees, and which relaxes current requirements, is not considered a backfit under 10 CFR 50.109(a). Therefore, a backfit analysis is not necessary.

### List of Subjects in 10 CFR Part 50

Antitrust, Classified information, Criminal penalties, Fire protection, Incorporation by reference, Intergovernmental relations, Nuclear power plants and reactors, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and 5 U.S.C. 553, the NRC is proposing to adopt the following amendments to 10 CFR part 50.

### PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

1. The authority citation for Part 50 is revised to read as follows:

**Authority:** Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 1244, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244 1246 (42 U.S.C. 5841, 5842, 5846).

Section 50.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951, as amended by Pub. L. 102-486, sec. 2902, 106 Stat. 3123, (42 U.S.C. 5851). Sections 50.10 also issued under secs. 101, 185, 68 Stat. 936, 955, as amended (42 U.S.C. 2131, 2235); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138). Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80-50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

2. Appendix J to 10 CFR Part 50 is amended by adding the following language between the heading and the

Table of Contents and adding the language for Option B after Section V.B3.

### Appendix J—Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors.

This appendix includes two options, A and B, either of which can be chosen for meeting the requirements of this appendix.

#### Options A—Prescriptive Requirements

\* \* \* \* \*

#### Option B—Performance-Based Requirements

##### Table of Contents

- I. Introduction.
- II. Definitions.
- III. Performance-based leakage test requirements.
  - A. Type A test.
  - B. Type B and C tests.
- IV. Recordkeeping.
- V. Implementation.

#### I. Introduction

One of the conditions required of all operating licenses for light-water-cooled power reactors as specified in § 50.54(o) is that primary reactor containments meet the leakage rate test requirements in either Option A or B of this appendix. These test requirements ensure that (a) leakage through these containments or systems and components penetrating these containments does not exceed allowable leakage rates specified in the Technical Specifications and (b) integrity of the containment structure is maintained during its service life. Option B of this appendix identifies the performance-based requirements and acceptance criteria for preoperational and subsequent periodic leakage rate testing.<sup>7</sup>

#### II. Definitions

*Acceptance criteria* means the performance standards against which test results are to be compared for establishing the acceptability of the containment system as a leakage limiting boundary.

*Containment system* means the principal barrier, after the reactor coolant pressure boundary, to prevent the release of quantities of radioactive material that would have a significant radiological effect on the health of the public.

*Overall integrated leakage rate* means the total leakage rate through all tested leakage paths, including containment welds, valves, fittings, and components that penetrate the containment system.

*La (percent/24 hours)* means the maximum allowable leakage rate at pressure Pa as specified in the Technical Specifications.

*Pa (p.s.i.g)* means the calculated peak containment internal pressure related to the design basis loss-of-coolant accident as specified in the Technical Specifications.

<sup>7</sup>Specific guidance concerning a performance-based leak test program, acceptable leakage rate test methods, procedures, and analyses that may be used to implement these requirements and criteria are provided in draft Regulatory Guide DG-1037, "Performance-Based Containment System Leakage Testing."

### III. Performance-Based Leakage Test Requirements

#### A. Type A Test

Type A tests to measure the containment system overall integrated leakage rate must be conducted under conditions representing design basis loss-of-coolant accident containment peak pressure. A Type A test must be conducted (1) after the containment system has been completed and is ready for operation and (2) at a periodic interval based on the historical performance of the overall containment system as a barrier to fission product releases to reduce the risk from reactor accidents. A general visual inspection of the accessible interior and exterior surfaces of the containment system for structural deterioration which may affect the containment leaktight integrity must be conducted prior to each test, and at a periodic interval between tests based on the performance of the containment system. The leakage rate must not exceed the allowable leakage rate ( $L_a$ ) with margin as specified in the Technical Specifications. The test results must be compared with previous results to examine the performance history of the overall containment system to limit leakage.

#### B. Type B and C Tests

Type B pneumatic tests to detect and measure local leakage rates across pressure retaining, leakage limiting boundaries, and Type C pneumatic tests to measure containment isolation valve leakage rates, must be conducted (a) prior to initial criticality, and (b) periodically thereafter at intervals based on the safety significance and historical performance of each boundary and isolation valve to ensure the integrity of the overall containment system as a barrier to fission product release to reduce the risk from reactor accidents. The performance-based testing program must contain performance goals and acceptance criteria, consideration of factors that affect performance when establishing test intervals, evaluations of performance of containment system components, and comparison to previous test results to examine the performance history of the overall containment system to limit leakage. The tests must demonstrate that (1) the sum of the leakage rates at accident pressure of Type B tests, and pathway leakage rates from Type C tests, is less than the total allowable leakage rate ( $L_a$ ) specified in the Technical Specification with margin; and (2) the performance goal for the reliability of the overall containment system to limit leakage during reactor accidents is not exceeded.

#### IV. Recordkeeping

The results of the preoperational and periodic Type A, B, and C tests must be documented to show that acceptance criteria for leakage have been met. The comparison to previous results of the performance of the overall containment system and of individual components within it must be documented to show that the test intervals established for the containment system and components within it are adequate. These records must be available for inspection at plant sites.

If any Type A, B, or C tests fail to meet their leakage rate acceptance criteria as

defined in the plant Technical Specifications those failures must be assessed for Emergency Notification System reporting under §§ 50.72(b)(1)(ii) and 50.72(b)(2)(i), and for a Licensee Event Report under §§ 50.73(a)(2)(ii).

## V. Implementation

### A. Applicability

The requirements in either or both Option B, III.A for Type A tests, and Option B, III.B for Type B and C tests, may be adopted on a voluntary basis by an operating nuclear power reactor licensee as specified in § 50.54 in substitution of the requirements for those tests contained in Option A of this appendix. If the requirements for tests in Option B, III.A or Option B, III.B are implemented, the recordkeeping requirements in Option B, IV for these tests must be substituted for the reporting requirements of these tests contained in Option A of this appendix.

### B. Effective Date

1. Specific exemptions to Option A of this appendix that have been formally approved by the AEC or NRC, according to 10 CFR 50.12, are still applicable to Option B of this appendix if necessary, unless specifically revoked by the NRC.

2. This amendment to this appendix, by inclusion of an additional option for meeting the requirements of the appendix, is effective (30 days after the publication of the final rule). At any time hereafter a licensee or applicant for an operating license can adopt Option B, or parts thereof, as specified in Section V.A of this appendix, by submitting a notification of its implementation plan and request for revision to technical specifications to the Director of the Office of Nuclear Reactor Regulation.

The regulatory guide or other implementation document used by a licensee, or applicant for an operating license, to develop a performance-based leakage testing program must be included, by general reference, in the plant's technical specifications. The detailed licensee programs must be available at the plant site for inspection thereafter. The programs must contain justification, including supporting analyses, if they deviate from methods approved by the Commission and endorsed in a regulatory guide. The deviations and their justifications must be described in the notification provided by the licensee of its implementation plan and the submittal for revision of plant technical specifications.

Dated at Rockville, MD, this 14th day of February, 1995.

For the Nuclear Regulatory Commission,  
**John C. Hoyle,**

*Acting Secretary of the Commission.*

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. 94-NM-120-AD]

#### Airworthiness Directives; Boeing Model 747SP Series Airplanes

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Supplemental notice of proposed rulemaking; reopening of comment period.

**SUMMARY:** This document revises an earlier proposed airworthiness directive (AD), applicable to certain Boeing Model 747SP series airplanes, that would have superseded an existing AD to require inspections to detect cracks in the web of the wing front spar, and modification, if necessary. That proposal was prompted by a report of cracking in the web in an area outside the inspection zone specified in the existing AD. A crack in the web that is not detected before it extends outside the chord footprints can allow fuel leakage. This action revises the proposed rule by reducing the compliance time for inspections of certain airplanes. The actions specified by this proposed AD are intended to prevent fuel leakage onto an engine and a resultant fire due to cracking in the web of the wing front spar.

**DATES:** Comments must be received by March 7, 1995.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 94-NM-120-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

**FOR FURTHER INFORMATION CONTACT:** Tim Backman, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2776; fax (206) 227-1181.

## SUPPLEMENTARY INFORMATION:

### Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 94-NM-120-AD." The postcard will be date stamped and returned to the commenter.

### Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 94-NM-120-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

### Discussion

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to add an airworthiness directive (AD), applicable to certain Boeing Model 747SP series airplanes, was published as a notice of proposed rulemaking (NPRM) in the **Federal Register** on October 28, 1994 (59 FR 54134). That NPRM would have superseded an existing AD to require repetitive inspections to detect cracks in the web of the wing front spar over engine numbers 2 and 3, and repair, if necessary. That NPRM was prompted by a report of cracking in the web in an area outside the inspection zone specified in the existing AD. That condition, if not corrected, could result in fuel leakage onto an engine and a resultant fire.