

area in accordance with a design¹ which provides reasonable assurance of control of radiological hazards to (i) be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years, and (ii) limit releases of radon-222 from uranium byproduct materials, and radon-220 from thorium byproduct materials, to the atmosphere so as not to exceed an average² release rate of 20 picocuries per square meter per second (pCi/m²s) to the extent practicable throughout the effective design life determined pursuant to (1)(i) of this Criterion. In computing required tailings cover thicknesses, moisture in soils in excess of amounts found normally in similar soils in similar circumstances may not be considered. Direct gamma exposure from the tailings or wastes should be reduced to background levels. The effects of any thin synthetic layer may not be taken into account in determining the calculated radon exhalation level. If non-soil materials are proposed as cover materials, it must be demonstrated that these materials will not crack or degrade by differential settlement, weathering, or other mechanism, over long-term intervals.

(2) As soon as reasonably achievable after emplacement of the final cover to limit releases of radon-222 from uranium byproduct material and prior to placement of erosion protection barriers or other features necessary for long-term control of the tailings, the licensee shall verify through appropriate testing and analysis that the design and construction of the final radon barrier is effective in limiting releases of radon-222 to a level not exceeding 20 pCi/m²s using the procedures described in 40 CFR part 61, appendix B, Method 115, or another method of verification approved by the Commission as being at least as effective in demonstrating the effectiveness of the final radon barrier.

(3) When phased emplacement of the final radon barrier is included in the applicable reclamation plan, the verification of radon-222 release rates required in paragraph (2) of this criterion must be conducted for each portion of the pile or impoundment as the final radon barrier for that portion is emplaced.

(4) Within ninety days of the completion of the required verification in paragraphs (2) and (3) of this criterion, the uranium mill licensee shall report to the Commission the results of the testing and analysis, detailing the actions taken to verify that levels of release of radon-222 do not exceed 20 pCi/m²s. The licensee shall maintain records until termination of the license documenting the source of input parameters including the

¹ In the case of thorium byproduct materials, the standard applies only to design. Monitoring for radon emissions from thorium byproduct materials after installation of an appropriately designed cover is not required.

² This average applies to the entire surface of each disposal area over a period of at least one year, but a period short compared to 100 years. Radon will come from both byproduct materials and from covering materials. Radon emissions from covering materials should be estimated as part of developing a reclamation plan for each site. The standard, however, applies only to emissions from byproduct materials to the atmosphere.

results of all measurements on which they are based, the calculations and/or analytical methods used to derive values for input parameters, and the procedure used to determine compliance. These records shall be kept in a form suitable for transfer to the custodial agency at the time of transfer of the site to DOE or a State for long-term care if requested.

(5) Near surface cover materials (i.e., within the top three meters) may not include waste or rock that contains elevated levels of radium; soils used for near surface cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding surface soils. This is to ensure that surface radon exhalation is not significantly above background because of the cover material itself.

(6) The design requirements in this criterion for longevity and control of radon releases apply to any portion of a licensed and/or disposal site unless such portion contains a concentration of radium in land, averaged over areas of 100 square meters, which, as a result of byproduct material, does not exceed the background level by more than: (i) 5 Picocuries per gram (pCi/g) of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over the first 15 centimeters (cm) below the surface, and (ii) 15 pCi/g of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over 15 cm thick layers more than 15 cm below the surface.

(7) The licensee shall also address the nonradiological hazards associated with the wastes in planning and implementing closure. The licensee shall ensure that disposal areas are closed in a manner that minimizes the need for further maintenance. To the extent necessary to prevent threats to human health and the environment, the licensee shall control, minimize, or eliminate post-closure escape of nonradiological hazardous constituents, leachate, contaminated rainwater, or waste decomposition products to the ground or surface waters or to the atmosphere.

Criterion 6A (1)—For impoundments containing uranium byproduct materials, actions required to achieve compliance with Criterion 6 must be completed as expeditiously as practicable considering technological feasibility after the pile or impoundment ceases operation. These controls must be carried out in accordance with a written, Commission-approved reclamation plan. Deadlines for completion of the final radon barrier and the following key interim reclamation milestone activities, if applicable, must be established as a condition of the individual license: Windblown tailings retrieval and placement on the pile, interim stabilization, dewatering, and recontouring.

(2) The Commission may approve a licensee's request to extend the time for performance of milestones if, after providing an opportunity for public participation, the Commission finds that the licensee has adequately demonstrated in the manner required in paragraph (2) of Criterion 6 that releases of radon-222 do not exceed an average of 20 pCi/m²s. If the delay is approved on the basis that the radon releases

do not exceed 20 pCi/m²s, a verification of radon levels, as required by paragraph (7) of Criterion 6, must be made annually during the period of delay. In addition, once the Commission has established the date in the reclamation plan for the milestone for completion of the final radon barrier, the Commission may extend that date based on cost if, after providing an opportunity for public participation, the Commission finds that the licensee is making good faith efforts to emplace the final radon barrier, the delay is consistent with the definition of *available technology*, and the radon releases caused by the delay will not result in a significant incremental risk to the public health.

(3) The Commission may authorize by license amendment, upon licensee request, a portion of the impoundment to accept uranium byproduct material or such materials that are similar in physical, chemical, and radiological characteristics to the uranium mill tailings and associated wastes already in the pile or impoundment, from other sources, during the closure process. This authorization may not be made if it results in a delay or impediment to emplacement of the final radon barrier over the remainder of the impoundment in a manner that will achieve levels of radon-222 releases not exceeding 20 pCi/m²s averaged over the entire impoundment. Authorization to remain accessible will only be made after providing opportunity for public participation. The verification required in paragraph (2) of Criterion 6 may be completed with a portion of the impoundment being used for further disposal if the Commission makes a final finding that the impoundment will continue to achieve a level of radon-222 releases not exceeding 20 pCi/m²s averaged over the entire impoundment. Reclamation of the disposal area, as appropriate, must be completed as expeditiously as practicable after disposal operations cease in accordance with paragraph (1) of this Criterion.

Dated at Rockville, MD., this 28th day of October, 1993.

For the Nuclear Regulatory Commission.
Samuel J. Chilk,
Secretary of the Commission.
[FR Doc. 93-26983 Filed 11-2-93; 8:45 am]
BILLING CODE 7590-01-P

10 CFR Part 52

RIN 3150-AE87

Rulemakings to Grant Standard Design Certification for Evolutionary Light Water Reactor Designs

AGENCY: Nuclear Regulatory Commission.

ACTION: Advanced notice of proposed rulemaking (ANPR).

SUMMARY: The Nuclear Regulatory Commission is reviewing four applications for Standard Design Certifications for light water reactors under applicable regulations. These

design certifications will be granted through rulemaking by adding a separate appendix to 10 CFR part 52 for each design so certified. The Commission anticipates that two of these applications for design certification may be ready for such rulemakings in 1994. This advance notice of proposed rulemaking is issued to invite public recommendations on issues pertaining to the form and content of rules that will certify evolutionary light water reactor designs.

DATES: The comment period expires on January 3, 1994. 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: Mail written comments to: The Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch. Comments may also be delivered to 11555 Rockville Pike, Rockville, MD, between 7:30 a.m. and 4:15 p.m. on Federal workdays. Copies of comments received will be available for examination and copying at the NRC Public Document room at 2120 L Street NW. (Lower Level), Washington, DC. Documents listed in Appendix 1 to this advance notice of proposed rulemaking are also available for examination and copying for a fee at the NRC Public Document room at 2120 L Street NW. (Lower Level), Washington, DC.

FOR FURTHER INFORMATION CONTACT: Harry S. Tovmassian, Office of Nuclear Regulatory Research, telephone (301) 492-3634 or Jerry N. Wilson, Office of Nuclear Reactor Regulation, telephone (301) 504-3145, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

SUPPLEMENTARY INFORMATION: 10 CFR part 52, subpart B—Standard Design Certifications, provides the requirements applicable to issuing a design certification for a standard nuclear power plant design. The Nuclear Regulatory Commission is planning to promulgate several rules which will provide for certification of each evolutionary light water reactor design which it reviews and approves. These rules would be set forth in separate appendices to 10 CFR part 52.

The Nuclear Regulatory Commission is presently evaluating four applications for Standard Design Certification in accordance with subpart B of 10 CFR part 52. The most recent NRC staff estimate of the schedules for these design reviews was provided to the Commission in SECY-93-097, "Integrated Review Schedules for the

Evolutionary and Advanced Light-Water Reactor Projects." These schedules project issuance of the first proposed rule certifying a standard plant design in June 1994.

The NRC staff has been developing guidance for the implementation of subpart B of 10 CFR part 52 following the issuance of part 52 in 1989. The proposed guidance has been set forth in several Commission (SECY) Papers and Staff Requirements Memoranda (SRM) referenced in appendix 1. One of these papers, SECY-92-287, "Form and Content for a Design Certification Rule," dated August 18, 1992, included a draft-proposed design certification rule which the NRC staff believes is prototypical of the type of rule that should be promulgated. This draft-proposed design certification rule has been revised in accordance with Commission guidance and provided as appendix 2 to focus comments on this ANPR. The elements contained in this prototype are those that the Commission believes should be included in a design certification rule.

This ANPR is published to provide the public an early opportunity to give advice and recommendations to the Commission on the form and content of a rule that would certify evolutionary nuclear power plant designs in accordance with 10 CFR part 52, subpart B. The NRC is particularly interested in the public's views concerning the following topics:

1. The acceptability of a two-tiered design certification rule structure;
2. The acceptability of the process and standards for changing Tier 2 information;
3. The acceptability of a Tier 2 exemption;
4. The acceptability of using a change process similar to the one in 10 CFR 50.59 applicable to operating reactors ("§ 50.59-like") prior to the issuance of a combined license that references a certified design;
5. The acceptability of identifying selected technical positions from the Safety Evaluation Report as "unreviewed safety questions" that cannot be changed under a "§ 50.59-like" change process;
6. Need for modifications to § 52.63(b)(2) if the two-tiered structure for the design certification rule is approved;
7. Whether the Commission should either incorporate or identify the information in Tier 1 or Tier 2 or both in the combined license;
8. The acceptability of using design-specific rulemakings rather than generic rulemaking for the technical issues whose resolution exceeds current

requirements. These "applicable regulations" will become part of the Commission's baseline of regulations for the specific certified design that are applicable and in effect at the time the certification is issued; and

9. The appropriate form and content of a design control document.

In addition to the publication of this ANPR, the Commission's Office of Nuclear Regulatory Research will mail a copy of this ANPR to domestic nuclear power plant vendors and other known interested persons to ensure that they are aware of this ANPR.

List of Subjects in 10 CFR Part 52

Administrative practice and procedure, Antitrust, Backfitting, Combined license, Early site permit, Emergency planning, Fees, Inspection, Limited work authorization, Nuclear power plants and reactors, Probabilistic risk assessment, Prototype, Reactor siting criteria, Redress of site, Reporting and recordkeeping requirements, Standard design, Standard design certification.

The authority citation for this document is: Sec. 161, Pub. L. 83-703, 68 Stat. 948, as amended (42 U.S.C. 2201); Sec. 201, Pub. L. 93-438, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Dated at Rockville, Maryland, this 28th day of October 1993.

For the Nuclear Regulatory Commission,
James M. Taylor,
Executive Director for Operations.

Appendix 1—References

1. SECY-90-377, November 8, 1990, "Requirements for Design Certification under 10 CFR Part 52."
2. SRM dated February 15, 1991, "SECY-90-377—Requirements for Design Certification under 10 CFR Part 52."
3. SECY-92-287, August 18, 1992, "Form and Content for a Design Certification Rule."
4. SRM dated September 30, 1992, "SECY-92-287—Form and Content for a Design Certification Rule."
5. SECY-92-287A, March 26, 1993, "Form and Content for a Design Certification Rule."
6. SRM dated June 23, 1993, "SECY-92-287/287A—Form and Content for a Design Certification Rule."
7. SECY-93-087, April 2, 1993, "Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-Water Reactor Designs."
8. SRM dated July 21, 1993, "SECY-93-087—Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-Water Reactor Designs."

9. Letter from Dennis M. Crutchfield, Associate Director for Advanced Reactors and License Renewal, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission to Patrick W. Marriott, Manager, Licensing & Consulting Services, GE Nuclear Energy, August 26, 1993, "Guidance on the Form and Content of a Design Control Document."

Appendix 2—Draft-Proposed Standard Design Certification Rule

10 CFR Part 52, Appendix A

A.1 Scope

This Appendix constitutes the standard design certification for the *Evolutionary Light Water Reactor (ELWR)* design, in accordance with 10 CFR Part 52, Subpart B (Section 52.54). The applicant for the certification of the *ELWR* design was _____.

A.3 Definitions

As used in this appendix:

Design control document (DCD) is the master document that contains the Tier 1 and Tier 2 design-related information that is incorporated by reference into this design certification rule.

Tier 1 is the portion of the design-related information contained in the DCD that is certified by this rule. This information consists of the Tier 1 design descriptions, the inspections, tests, analyses, and acceptance criteria (ITAAC), the site parameters, and the interface requirements.

Tier 2 is the remainder of the design-related information contained in the DCD that is approved by this rule. Tier 2 contains detailed information on the *ELWR* design that supports the information provided in Tier 1. Tier 2 includes safety analyses for the *ELWR* design and supporting details on the inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met.

A.4 Information Collection Requirements: OMB Approval

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this appendix to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). OMB has approved the information collection requirements contained in the appendix under control number 3150 _____.

(b) The approved information collection requirements contained in this appendix appear in section A.15.

A.5 Contents of the *ELWR* Design Certification

(a) The following documents, which have been approved by the Office of the Federal Register for incorporation by reference, are deemed to be part of the *ELWR* design certification:

- (1) *ELWR* DCD dated _____.
(The following are examples of secondary references)
- (2) ASME Boiler and Pressure Vessel Code, Section III, Subsection NE, Division 1, Class MC.
- (3) ANSI Standard A58.1, Minimum Design Loads for Buildings and Other Structures, American National Standards Institute.
- (4) Regulatory Guide 1.59, Rev. 2, "Design Basis Floods for Nuclear Power Plants."

(5) Other documents considered necessary.

(b) An applicant for a construction permit or license that references this standard design certification must reference both tiers of information in the *ELWR* DCD.

(c) If there is a conflict between the information in the *ELWR* DCD and the application for standard design certification or the Final Safety Evaluation Report on the application and supplements thereto, then the *ELWR* DCD is the controlling document.

A.7 Regulations Applicable to the *ELWR* Design Certification

The following were considered to be regulations that are applicable to the *ELWR* design certification, including the regulations identified in § 52.48, and were in effect at the time this design certification was issued for the purposes of §§ 52.48, 52.54, 52.59, and 52.63:

(The following are examples of applicable regulations)

(a) The standard design must include features that reduce the potential for and effect of interactions with molten core debris by:

- (1) Providing reactor cavity floor space to promote core debris spreading;
- (2) Providing a means to flood the reactor cavity to assist in the cooling process; and
- (3) Protecting the containment liner and other structural members from direct contact by molten core debris.

(b) An application for design certification must contain:

- (1) The description of the reliability assurance program used during the initial *ELWR* design that includes, scope, purpose, and objectives;
- (2) The methodology used to evaluate and prioritize the structures, systems, and components in the *ELWR* design, based upon their degree of risk-significance;

(3) The structures, systems, and components designated as risk-significant; and

(4) For those structures, systems, and components designated as risk-significant:

(i) The methodology used to determine dominant failure modes that considered industry experience, analytical models, and existing requirements;

(ii) The key reliability assumptions and risk insights; and

(iii) Operation, maintenance, and monitoring activities to be performed by a licensee that references the *ELWR* design.

(c) Other applicable regulations considered necessary.

A.9 Issue Resolution for the *ELWR* Design Certification

(a) All radiological safety issues necessarily associated with approval of the information set forth in the *ELWR* DCD are "resolved in connection with the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4).

(b) All environmental issues necessarily associated with approval of the information set forth in the *ELWR* DCD, and the Environmental Impact Statement or Environmental Analysis for this design are "resolved in connection with the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4).

A.11 Duration of the *ELWR* Design Certification

This standard design certification may be referenced for a period of 15 years from December 3, 1993, except as provided for in §§ 52.55(b) and 52.57(b). This standard design certification will remain valid for an applicant or licensee that references this certification until their application is withdrawn or their license expires.

A.13 Change Process

(a) For rule changes, refer to § 52.63(a)(1) for generic changes to this appendix or Tier 1 information.

(b) For changes to this appendix or Tier 1 information, for plants that reference the *ELWR* design certification:

- (1) Refer to § 52.63(a)(3) for NRC mandated changes; and
- (2) Refer to § 52.63(b)(1) for exemptions.

(c) For Tier 2 rule changes:

(1) Notwithstanding any provision in 10 CFR 50.109, while the *ELWR* design certification is in effect under § 52.55 or 52.61, the Commission may not modify, rescind, or impose new requirements on Tier 2 information, whether on its own

motion or in response to a petition from any person, unless the Commission determines in a rulemaking that a modification is necessary either to bring the Tier 2 information or the referencing plants into compliance with the Commission's regulations applicable and in effect at the time the ELWR design certification was issued, or to ensure adequate protection of the public health and safety or the common defense and security. The rulemaking procedures must provide for notice and comment and an opportunity for the party which applied for the certification to request an informal hearing which uses the procedures described in § 52.51.

(2) Any modification the NRC imposes under A.13(c)(1) will be applied to all plants referencing the ELWR design, except those to which the modification has been rendered technically irrelevant by action taken under A.13(d).

(d) For Tier 2 changes, for plants that reference the ELWR design certification:

(1) While the ELWR design certification is in effect under Section 52.55 or 52.61, unless

(i) A modification is necessary to secure compliance with the Commission's regulations applicable and in effect at the time the ELWR design certification was issued, or to assure adequate protection of the public health and safety or the common defense and security, and

(ii) Special circumstances as defined in 10 CFR 50.12(a) are present, the Commission may not impose new requirements by plant-specific order on the Tier 2 information of a specific plant referencing the ELWR design certification.

(2) An applicant or licensee who references the ELWR design certification may request an exemption from the Tier 2 information. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 50.12(a).

(3) An applicant or licensee who references the ELWR design certification may make changes to the Tier 2 information, without prior NRC approval, unless the proposed change involves a change to this appendix or the Tier 1 information, the technical specifications, or an unreviewed safety question as defined in 10 CFR 50.59(a)(2) or identified below. These Tier 2 changes will no longer be considered "matters resolved in connection with the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4).

(The following are examples of identified unreviewed safety questions)

(i) The fuel and control rod design criteria for the ELWR design; the first cycle fuel, control rod, and core design; and the methods used to analyze these components.

(ii) The ELWR human-system interface design implementation process.

(iii) Other identified unreviewed safety questions.

A.15 Recordkeeping

(a) An applicant or licensee that references the ELWR design certification must maintain records of all changes resulting from Section A.13(b) or (d). These records must describe the changes, discuss the need for the change, and, as applicable, discuss any decrease in safety that may result from the reduction in standardization caused by the change, as required by 10 CFR 52.63.

(b) An applicant or licensee that references the ELWR design certification must maintain and submit quarterly reports of all changes to the facility under Section A.13(d)(3) until the applicant or licensee receives either an operating license under 10 CFR Part 50 or the Commission makes its findings under 10 CFR 52.103. Records must be maintained and submitted in accordance with the recordkeeping requirements of 10 CFR 50.59 thereafter.

(c) An applicant or licensee that references the ELWR design certification must maintain all records required by this section in an auditable form and make them available for inspection until their application is withdrawn or their license expires.

[FR Doc. 93-26984 Filed 11-2-93; 8:45 am]

BILLING CODE 7590-01-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 91-ANE-45]

Airworthiness Directives; General Electric Company CF6 Series Turbofan Engines

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 General Electric Company (GE) CF6-80A series turbofan

engines, that would have required a one-time inspection for cracks in the stage 1 high pressure turbine (HPT) disk rim bolt holes in accordance with GE Commercial Engine Service Memorandum No. 27, dated September 27, 1991. That proposal was prompted by a report of an uncontained stage 1 HPT disk failure, which resulted in an aborted takeoff. This action revises the proposed rule by requiring an inspection for cracks in the stage 1 HPT disk rim bolt holes in accordance with the revised inspection program described in GE CF6-80A Service Bulletin No. 72-604, Revision 3, dated April 8, 1993. The actions specified by this proposed AD are intended to prevent an uncontained stage 1 HPT disk failure, which could result in an inflight engine shutdown, aborted takeoff, or damage to the aircraft.

DATES: Comments must be received by December 3, 1993.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 91-ANE-45, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from General Electric Aircraft Engines, CF6 Distribution Clerk, room 132, 111 Merchant Street, Cincinnati, OH 45246. This information may be examined at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Robert J. Ganley, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (617) 238-7138; fax (617) 238-7199.

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 should 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