

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

RIN 3150-AF75

Definition of Safety-Related Structures, Systems, and Components; Technical Amendment

AGENCY: Nuclear Regulatory Commission.

ACTION: Direct final rule.

SUMMARY: The Nuclear Regulatory Commission is amending its regulations to correct an error in the language of several sections in the regulations governing nuclear power plant licensing that define the term, "safety-related structures, systems, and components." These definitions are inconsistent with the definition in regulations applicable to the siting of nuclear power plants and the Commission's longstanding practice and interpretation of that term.

EFFECTIVE DATE: This direct final rule is effective November 7, 1997, unless significant adverse comments are received by October 8, 1997. If significant adverse comments are received, the effective date will be delayed and timely notice will be published in the **Federal Register**.

ADDRESSES: Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff. Hand deliver comments to 11555 Rockville Pike, Maryland, between 7:30 am and 4:15 pm on Federal workdays.

For information on submitting comments electronically, see the discussion under Electronic Access in the Supplementary Information Section.

Copies of any comments received may be examined at the NRC Public Document Room, 2120 L Street NW (Lower Level), Washington, DC.

FOR FURTHER INFORMATION CONTACT: Geary S. Mizuno, Office of General Counsel, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001, telephone (301) 415-1639; e-mail GSM@nrc.gov, or Clark Prichard, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6203; e-mail CWP@nrc.gov.

SUPPLEMENTARY INFORMATION: This direct final rule corrects an error in the language of several regulations in 10 CFR Part 50 defining the term, "safety-related structures, systems, and components," which is inconsistent with the concept of "safety-related

structures, systems, and components" in 10 CFR Part 100, Appendix A.

Currently, "safety-related structures, systems, and components" in 10 CFR 50.2 (Definitions) and 10 CFR 50.65 (Maintenance Rule), and "safety-related electrical equipment" in 10 CFR 50.49 (Environmental Qualifications Rule) are defined as those structures, systems and components that are relied upon to remain functional during and following design basis events to ensure:

(1) The integrity of the reactor coolant pressure boundary,

(2) The capability to shut down the reactor and maintain it in a safe shutdown condition, and

(3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the applicable guideline exposures set forth in § 50.34(a)(1) or § 100.11 of this chapter, as applicable. (emphasis added)

The corrections would replace the conjunctive word, "and," by the disjunctive word, "or," in these regulations, thereby clarifying that a structure, system, or component which falls into any one (or more) of the three categories set forth in the definition shall be regarded as "safety-related." The correction would also delete the word, "postulated," in the definition of safety-related structures, systems, and components' in 10 CFR 50.2. The corrections do not constitute a change in Commission policy with respect to the scope of structures, systems, and components to be regarded as "safety-related." Rather, the corrections will conform the language in 10 CFR 50.2, 50.49 and 50.65 to the language in 10 CFR Part 100, Appendix A, where the concept of "safety-related structures, systems and components" was first incorporated into the Commission's regulations.

In 10 CFR Part 100, Appendix A, which sets forth the seismic design requirements for nuclear power plants, the nuclear power plant applicant must determine the design basis for vibratory ground motion from the "Safe Shutdown Earthquake" (SSE). Once the SSE is determined, the nuclear power plant must be designed such that "if a Safe Shutdown Earthquake occurs, certain structures, systems and components will remain functional." *Id.*, Subparagraph VI.(a)(1). The regulation then defines these structures, systems and components which must be designed to withstand the SSE as those necessary to assure:

(i) The integrity of the reactor coolant pressure boundary,

(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition, or

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of this part." (emphasis added).

Id., see also 10 CFR Part 100, Appendix A, Section III, definition of "safe shutdown earthquake." The regulation then denotes these structures, systems and components as "safety-related." 10 CFR Part 100, Appendix A, Subparagraph VI.(a)(1)(second textual paragraph).¹

The first regulation in 10 CFR Part 50 utilizing the term, "safety-related" was 10 CFR Part 50, Appendix B, the introduction of which stated that the requirements of the appendix applied to the "safety-related functions" of structures, systems, and components which prevent or mitigate the consequences of postulated accidents. However, Appendix B did not actually include a definition of "safety-related". The first regulation in 10 CFR Part 50 to include a definition of "safety-related structures, systems, and components" was 10 CFR 50.49. As originally promulgated, § 50.49(b)(1) defined "safety-related equipment" as those necessary "to ensure:

(i) The integrity of the reactor coolant pressure boundary,

(ii) The capability to shut down the reactor and maintain it in a safe condition, and

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the 10 CFR Part 100 guidelines." (emphasis added) (48 FR 2729; January 21, 1983).

Thus, the core definition of "safety-related equipment" in 10 CFR 50.49 was essentially the same as the definition of "safety-related structures, systems, and components" in 10 CFR Part 100, Appendix A. However, nothing in the statements of considerations for the proposed or final 10 CFR 50.49 explains why the "or" in the core definition of "safety related" was changed to "and." See 47 FR 2876; January 20, 1982—proposed rule and 48 FR 2729; January 21, 1983—final rule. Nor was there any discussion in the statements of

¹ See also 38 FR 31279 at 31280 (November 13, 1973) (middle column) noting that Paragraph VI(a)(1) of the final rule was changed to "eliminate the requirement that safety-related structures, systems, and components also be designed to withstand the effects of vibratory motion of fifty percent of the Safe Shutdown Earthquake in combination with other appropriate loads well within elastic limits." (emphasis added).

considerations which would suggest that the Commission intended to narrow the scope of structures, systems and components that would be considered "safety-related." Indeed, language in Revision 1 to Regulatory Guide (RG) 1.89, "Environmental Qualification of Certain Electrical Equipment Important to Safety for Nuclear Power Plants" (June 1984) strongly suggests that the use of the conjunctive word, "and" was an error and was not intended to change the fundamental scope of safety-related structures, systems and components. Appendix A to RG 1.89, "Typical Safety-Related Electrical Equipment or System," purports to list systems and equipment that are "safety-related." However, none of the equipment and systems actually listed as being "safety-related" would meet the definition of safety-related structures, systems and components if the conjunctive "and" were interpreted to require all three criteria in the "safety-related" definition to be satisfied. Moreover, a footnote to Appendix A of RG 1.89 states:

Paragraph 50.49(b)(1) identifies safety-related electrical equipment as a subset of electrical equipment important to safety and defines it as the equipment that is relied upon to remain functional during and following design basis events to ensure (1) the integrity of the reactor coolant pressure boundary, (2) the capability to shut down the reactor and maintain it in a safe condition, or (3) the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the 10 CFR Part 100 guidelines. (emphasis added)

That the RG uses the disjunctive "or" when describing the underlying regulatory requirement of 10 CFR 50.49 is a strong indication that the NRC did not intend to change the scope of structures, systems, and components deemed to be "safety-related," and that the use of the conjunctive word, "and," was a grammatical error.

The conjunctive word, "and," was subsequently used in the Maintenance Rule, 10 CFR 50.65, to describe the structures, systems, and components subject to the rule, as well as in the definition of "safety-related structures, systems, and components" contained in 10 CFR 50.2, which was added by a 1996 rulemaking amending Parts 50 and 100. Because the statements of considerations for the proposed and final rules did not contain any discussion of the "safety-related" definition, the Commission concludes that the subsequent rules simply repeated the definition used in 10 CFR 50.49 without intending any change in the scope of safety-related structures, systems, and components. See 53 FR

47822 (November 28, 1988—proposed Maintenance Rule); 56 FR 31324 (July 10, 1991—final Maintenance Rule); 57 FR 47802 (October 20, 1992—first proposed rule amending parts 50 and 100); 59 FR 52255 (October 17, 1994—second proposed rule amending parts 50 and 100); and 61 FR 65171 (December 11, 1996—final rule amending parts 50 and 100).

The final rule amending 10 CFR Parts 50 and 100, which *inter alia* added the definition of "safety-related structures, systems, and components to 10 CFR 50.2, also added the word, "postulated," to the term, "design basis events," so that the term reads, "design basis (postulated) events." Nothing in the statements of consideration for the first or second proposed rules, or the final rule, explains the addition of the word, "postulated," in the Section 50.2 definition of "safety-related structures, systems, and components while leaving it out of the definitions of "safety-related structures, systems, and components" in 10 CFR 50.65 and 10 CFR Part 100, Appendix A, and "safety-related electrical equipment" in 10 CFR 50.49. Therefore, the Commission also concludes that the addition of the word, "postulated" was an error and should be removed to conform the definition of "safety-related structures, systems, and components" to the long-standing wording of that term.

For these reasons, the Commission has determined that the amendments to 10 CFR 50.2, 50.49, and 50.65 are of a corrective nature, and do not involve any change in existing policy or otherwise constitute a new policy with respect to the scope of structures, systems, and components considered to be "safety-related." Furthermore, since these amendments clarify the original intent of the Commission, they can be considered to be an interpretation of existing regulations. Accordingly, the Commission finds that public notice and opportunity for comment are unnecessary pursuant to 10 U.S.C. 553(b)(3)(A) and (B), and the Commission is publishing this rule in final form without first seeking public comments on the amendment in a proposed rule. However, if the NRC receives significant adverse comment by [30 days after publication], the NRC will publish a notice in the **Federal Register** that withdraws this action, and will address the comments received in response to this direct final rule as comments on a proposed rule (identical to this direct final rule) that is being concurrently published in the proposed rules section of this **Federal Register**. Any significant adverse comments will be deemed to be comments on the

proposed rule and will be addressed in a subsequent final rule. The NRC will not initiate a second comment period on this action.

Criminal Penalties

For purposes of Section 223 of the Atomic Energy Act of 1954, as amended (AEA), the Commission is issuing the direct final rule under one or more of sections 161b, 161i, or 161o of the AEA. Willful violations of the direct final rule are subject to criminal enforcement.

Electronic Access

Comments may be submitted electronically, in either ASCII text or Word Perfect format (version 5.1), by calling the NRC Electronic Bulletin Board on FedWorld or connecting to the NRC interactive rulemaking web site, "Rulemaking Forum." 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. Communications 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: 703-321-3339; 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, access the NRC subsystem from the main FedWorld menu by selecting "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.

If you contact FedWorld using Telnet, you will see the NRC area and menus, including the Rules menu. Although you will be able to download documents and leave messages, you will not be able to write comments or upload files (comments). If you contact FedWorld using FTP, all files can be accessed and downloaded but uploads are not allowed; all you will see is a list of files without descriptions (normal Gopher look). An index file listing all files within a subdirectory, with descriptions, is included. There is a 15-minute time limit for FTP access.

Although FedWorld can be accessed through the World Wide Web, like FTP that mode only provides access for downloading files and does not display the NRC Rules menu.

You may also access the NRC's interactive rulemaking web site through the NRC home page (<http://www.nrc.gov>). This site provides the same access as the FedWorld bulletin board, including the facility to upload comments as files (any format), if your web browser supports that function.

For more information on NRC bulletin boards, call Mr. Arthur Davis, Systems Integration and Development Branch, U.S. Nuclear Regulatory Commission, Telephone: 301-415-5780; e-mail: AXD3@nrc.gov. For information about the interactive rulemaking site, contact Ms. Carol Gallagher, (301) 415-6215; e-mail CAG@nrc.gov.

Environmental Impact: Categorical Exclusion

The Commission has determined that this direct final rule is the type of action described in categorical exclusion 10 CFR 51.22(c)(2), since this direct final rule makes amendments to the regulations which are corrective and nonpolicy in nature. Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this final rule.

Paperwork Reduction Act Statement

This direct final rule does not contain a new or significantly amended

information collection requirement subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, et seq.). Existing requirements were approved by the Office of Management and Budget, approval number 3150-0011.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Regulatory Analysis

The Commission has not prepared a regulatory analysis for this action because this direct final rule does not present new or revised positions, impose a new requirement, or recommend new action.

Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this rule will not have a significant economic impact on small entities. This rule affects only the 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 adopted by the NRC (10 CFR 2.810). Since these companies are dominant in their service areas, this rule does not fall within the purview of the Act.

Backfit Analysis

The direct final rule does not impose any change on licensees with respect to the term, "safety-related structures, systems and components." Rather, it provides a definition of "safety-related structures, systems and components" throughout 10 CFR Part 50 that is identical to the definition contained in 10 CFR Part 100, Appendix A, the NRC's first regulation defining "safety-related structures, systems and components," which provides that "safety-related" structures, systems and components are those that possess any one of the three numbered attributes listed in the definition. This definition is consistent with both the NRC's and nuclear power plant licensees' longstanding understanding that the term, "safety-related structures, systems and components" includes those structures, systems and components that possess any one of the three listed attributes. Therefore, the NRC has determined that the Backfit Rule, 10 CFR 50.109, does not apply to this direct final rule because it does not impose any backfits as defined in 10 CFR 50.109(a)(1), and a backfit analysis

has not been prepared for this direct final rule.

Small Business Regulatory Enforcement Fairness Act

In accordance with the Small Business Regulatory Enforcement Fairness Act of 1996, the NRC has determined that this action is not a "major rule" and has verified this determination with the Office of Information and Regulatory Affairs, Office of Management and Budget.

List of Subjects in 10 CFR Part 50

Antitrust, Classified information, Criminal penalties, Fire protection, 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. 552 and 553, the NRC is adopting the following amendments to 10 CFR Part 50.

PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

1. The authority citation for Part 50 continues 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 (42 U.S.C. 5851). Section 50.10 also issued under secs. 101, 185, 68 Stat. 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, and 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. In § 50.2, the definition of *safety-related structures, systems and components* is revised to read as follows:

§ 50.2 Definitions.

* * * * *

Safety-related structures, systems and components means those structures, systems and components that are relied upon to remain functional during and following design basis events to assure:

- (1) The integrity of the reactor coolant pressure boundary
- (2) The capability to shut down the reactor and maintain it in a safe shutdown condition; or
- (3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the applicable guideline exposures set forth in § 50.34(a)(1) or § 100.11 of this chapter, as applicable.

* * * * *

3. In § 50.49, paragraph (b)(1)(i)(B) is revised to read as follows:

§ 50.49 Environmental qualification of electric equipment important to safety for nuclear power plants.

* * * * *

- (b) * * *
- (1) * * *
- (i) * * *
- (B) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

* * * * *

4. In § 50.65, paragraph (b)(1) is revised to read as follows:

§ 50.65 Requirements for monitoring the effectiveness of maintenance at nuclear power plants.

* * * * *

- (b) * * *

(1) Safety-related structures, systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to the guidelines in § 50.34(a)(1) or § 100.11 of this chapter, as applicable.

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Dated at Rockville, MD, this 5th day of August, 1997.

For the Nuclear Regulatory Commission.

L. Joseph Callan,

Executive Director for Operations.

[FR Doc. 97-23611 Filed 9-5-97; 8:45 am]

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