

## **Draft Rule Language for Proposed Rulemaking**

### **Security Assessment for New Nuclear Power Reactors (10 CFR Parts 50, 52, and 73)**

#### **Background:**

The Nuclear Regulatory Commission (NRC) is making available draft rule language for a new 10 CFR 73.62 and conforming changes to 10 CFR Parts 50, 52, and 73. The NRC is proposing to amend its regulations by adding security assessment requirements for future applicants for a construction permit, operating license, design certification, manufacturing license, or combined license. The proposed amendments would require applicants to assess specific security design features that would be incorporated into the plant design to support the overall security effectiveness of the nuclear power plant. This proposed rule is a supplement to the proposed rule, "Power Reactor Security Requirements," to be published shortly in the *Federal Register*.

The availability of the draft rule language is intended to inform stakeholders of the current status of the NRC's activities to require applicants for new nuclear power reactors to conduct a security assessment and to include it with their applications. This early draft rule language may be incomplete in one or more respects and may be subject to significant revisions during the rulemaking process. The NRC is not soliciting formal public comments on this draft rule language. No stakeholder requests for a comment period will be granted at this stage in the rulemaking process. Public comments will be requested on the proposed rule at a later date in accordance with the rulemaking provisions of the Administrative Procedures Act.

#### **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. 444, 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); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note). Section 50.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5841). 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, 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 § 50.34, paragraph (h) is redesignated as paragraph (m), paragraphs (i) through (l) are reserved, and a new paragraph (h) is added to read as follows:

## **§ 50.34 Contents of applications; technical information.**

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### **(h) *Security Assessment for Design.***

(1) *Construction permit application.* Each application for a construction permit filed after [EFFECTIVE DATE OF FINAL RULE] must describe how the applicant will comply with 10 CFR 73.62 of this chapter in completing the design of the nuclear power plant, including a description of the applicant's plan for conducting a security assessment which complies with § 73.62(d), and describes the security features incorporated into the final design of the facility.

(2) *Operating license application.* Each application for an operating license filed after [EFFECTIVE DATE OF FINAL RULE] must contain a security assessment which complies with the requirements of 10 CFR 73.62 of this chapter.

### **(i) - (l) RESERVED**

### **(m) Conformance with the Standard Review Plan (SRP).**

(1)(i) Applications for light water cooled nuclear power plant operating licenses docketed after May 17, 1982 shall include an evaluation of the facility against the Standard Review Plan (SRP) in effect on May 17, 1982 or the SRP revision in effect six months prior to the docket date of the application, whichever is later.

(ii) Applications for light water cooled nuclear power plant construction permits, manufacturing licenses, and preliminary or final design approvals for standard plants docketed after May 17, 1982 shall include an evaluation of the facility against the SRP in effect on May 17, 1982 or the SRP revision in effect six months prior to the docket date of the application, whichever is later.

(2) The evaluation required by this section shall include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for a facility and those corresponding features, techniques, and measures given in the SRP acceptance criteria. Where such a difference exists, the evaluation shall discuss how the alternative proposed provides an acceptable method of complying with those rules or regulations of Commission, or portions thereof, that underlie the corresponding SRP acceptance criteria.

(3) The SRP was issued to establish criteria that the NRC staff intends to use in evaluating whether an applicant/licensee meets the Commission's regulations. The SRP is not a substitute for the regulations, and compliance is not a requirement. Applicants shall identify differences from the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP criteria provide an acceptable method of complying with the Commission's regulations.

3. In Appendix M to Part 50 paragraph 4(c) is added to read as follows:

(c) Each application for a manufacturing license filed after [EFFECTIVE DATE OF FINAL RULE] must describe how the applicant will comply with 10 CFR 73.62 of this chapter in completing the design of the nuclear power plant, including a description of the applicant's plan for conducting a security assessment which complies with 73.62 and which describes the security design features incorporated into the final design of the facility.

## **PART 52 - EARLY SITE PERMITS; STANDARD DESIGN CERTIFICATIONS; AND COMBINED LICENSES FOR NUCLEAR POWER PLANTS**

4. The authority citation for part 52 continues to read as follows:

AUTHORITY: Secs. 103, 104, 161, 182, 183, 186, 189, 68 Stat. 936, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2133, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, 202, 206, 88 Stat. 1242, 1244, 1246, as amended (42U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

5. In § 52.3, paragraph (e) is revised to read as follows:

**§ 52.3 Definitions.**

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(e) All other terms in this part have the meaning set out in 10 CFR 50.2, **10 CFR 73.2** , 10 CFR 73.62, or section 11 of the Atomic Energy Act, as applicable.

6. In § 52.47, paragraphs (c) through (f) are reserved, and a new paragraph (g) is added to read as follows:

**§ 52.47 Contents of applications.**

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(c) - (f) RESERVED

(g) *Security Assessment for Design*. Each application for a standard design certification filed after [EFFECTIVE DATE OF FINAL RULE] shall contain a security assessment which complies with the requirements of 10 CFR 73.62 of this chapter, and describe the security design features incorporated into the standard design certification.

7. Section 52.54 is revised to read as follows:

**§ 52.54 Issuance of standard design certification.**

(a) After conducting a rulemaking proceeding under § 52.51 on an application for a standard design certification and receiving the report to be submitted by the Advisory Committee on Reactor Safeguards under § 52.53, and upon determining that the application meets the applicable standards and requirements of the Atomic Energy Act and the Commission's regulations, the Commission shall issue a standard design certification in the form of a rule for the design which is the subject of the application.

(b) The design certification rule shall specify the site parameters, **security design features**, security parameters, and any additional requirements of the design certification rule.

8. In § 52.79, paragraphs (e) through (f) are reserved, and a new paragraph (g) is added to read as follows:

**§ 52.79 Contents of applications; technical information.**

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(e) - (f) RESERVED

(g) *Security Assessment for Design*. Each application for a combined license filed after [EFFECTIVE DATE OF FINAL RULE] shall contain a security assessment which complies with the requirements of 10 CFR 73.62 of this chapter, and describe the security design features incorporated into the design of the nuclear power plant. If the application references either a standard design certification rule under subpart B of this part, or the use of a nuclear power

reactor manufactured under a manufacturing license in Appendix M of this part, then:

- (i) The security assessment performed for the design certification or manufacturing license shall be deemed to be incorporated by reference into the combined license application;
- (ii) The security assessment for the combined license application need not address the design of the plant within the scope of the design certification or manufacturing license;
- (iii) The security assessment for the combined license must identify the security design functions, security design features and operational programs, and describe how security functions, not previously evaluated at the design stage, are addressed.

[NEED TO ADD CHANGES TO MANUFACTURING LICENSE IN PART 52, APPENDIX M]

9. In Appendix M to Part 52 paragraph 4(c) is added to read as follows:

(c) Each application for a manufacturing license filed after [EFFECTIVE DATE OF FINAL RULE] must describe how the applicant will comply with 10 CFR 73.62 of this chapter in completing the design of the nuclear power plant, including a description of the applicant's plan for conducting a security assessment which complies with 73.62 and which describes the security design features incorporated into the final design of the facility.

## **PART 73 - PHYSICAL PROTECTION OF PLANTS AND MATERIALS**

10. The authority citation for part 73 continues to read as follows:

AUTHORITY: Secs. 53, 161, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2201); sec. 201, as amended, 204, 88 Stat. 1242, as amended, 1245, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 5841, 5844, 2297f); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note). Section 73.1 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 73.37(f) also issued under sec. 301, Pub. L. 96-295, 94 Stat. 789 (42 U.S.C. 5841 note). Section 73.57 is issued under sec. 606, Pub. L. 99-399, 100 Stat. 876 (42 U.S.C. 2169).

X. A new § 73.62 is added to read as follows:

### **§ 73.62 Security assessment for nuclear power plants.**

#### **(a) Definitions.**

*Security design features* means structures, systems and components of a nuclear power plant that are relied upon to either: (1) detect, delay, assess, or respond to an attack against target sets of a nuclear power plant by an adversary possessing the characteristics of the design basis threat; (2) mitigate the effects of such an attack; or (3) mitigate the effects of a hypothetical attack resulting in a loss of a large area of the facility due to explosions or fires.

*Security function* means those functions necessary to either: (1) detect, delay, assess, or respond to an attack against target sets of a nuclear power plant by an adversary possessing the characteristics of the design basis threat; (2) mitigate the effects of such an attack; or (3) mitigate the effects of a hypothetical attack resulting in a loss of a large area of the facility due to explosions or fires. Security functions may be accomplished through security design features or by the operational program as described in the physical security, training and qualification, and contingency plans (security plans) under § 73.55 of this part.

*Security parameters* means: (1) the physical characteristics/features of a site where the nuclear power reactor/plant design is to, or may, be utilized, either as postulated in the security assessment or as identified in accordance with 10 CFR 100.21(f); (2) design features which are outside the scope of the design being addressed at the particular stage of the regulatory process, which are postulated in a security assessment; and (3) features of a physical security program under § 73.55 which are postulated in a security assessment.

(b) *Security assessment.* Each applicant for a construction permit or operating license for a nuclear power plant under part 50 of this chapter, a standard design certification under subpart B of part 52 of this chapter, a combined license under subpart C of part 52, and a manufacturing license under appendix M of part 52, whose applications are filed after [EFFECTIVE DATE OF RULE] shall perform a security assessment of the reactor or facility design (within the scope of design being addressed at the particular stage of the regulatory process). The security assessment must:

(1) Identify target sets and, for selected scenarios, perform a systematic evaluation using risk evaluation methodologies that demonstrate the ability to meet the performance objectives of § 73.55(a);

(2) Identify security design features to be incorporated into the design of the reactor or facility, which provide high assurance that security functions can be accomplished, to the maximum extent practical, without undue reliance upon operational security programs that are required as part of the security plans under § 73.55; and

(3) Demonstrate that the security design features incorporated into the nuclear power plant design provide mitigation of the effects of an attack resulting in a loss of a large area of the facility due to explosions and fires, in accordance with appendix C to Part 73.

(c) *Contents of security assessment.* The security assessment shall include:

(1) A description of the process to develop and identify target sets, including analyses and methodologies used to determine and group the target set equipment;

(2) A description of the methodologies used to perform the security assessment;

(3) The security functions for the plant;

(4) The security design features incorporated into the design, together with an explanation of how each design feature provides or enhances the capability of the plant to protect the target sets against an adversary possessing the characteristics of the design basis threat, or to mitigate the effects of postulated attacks resulting in a loss of a large area of the facility due to explosions or fires;

(5) The security parameters (including those identified from the security assessment conducted at the construction permit, design certification, or manufacturing stage, as applicable);

(6) Security design features considered and rejected for inclusion in the design, and the bases for rejection;

(7) Security parameters to be considered in the security design assessments for future design stages (as applicable), and in the development of the security plans required under § 73.55.

(d) - (e) RESERVED

(f) *Incorporation of security design features into design.* Each standard design approval, standard design certification, construction permit, operating license, combined license, and manufacturing license whose applications are filed after [EFFECTIVE DATE OF RULE] must have security design features that accomplish security functions, to the maximum extent practical, without undue reliance upon operational security programs that are required as part of a physical security plan under § 73.55.



