United States Nuclear Regulatory Commission Preliminary Proposed Rule Language Part 73 of Title 10 of the Code of Federal Regulations (10 CFR) [NRC-2017-0227]

The NRC is proposing to amend the following sections as indicated by text in red:

10 CFR 73.55 - Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage.

(a) Introduction. (1) By March 31, 2010, each nuclear power reactor licensee, licensed under 10 CFR part 50, shall implement the requirements of this section through its Commission-approved Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Cyber Security Plan referred to collectively hereafter as "security plans." Current applicants for an operating license under 10 CFR part 50, or combined license under 10 CFR part 52 who have submitted their applications to the Commission prior to the effective date of this rule must amend their applications to include security plans consistent with this section.
(2) The security plans must identify, describe, and account for site-specific conditions that affect the licensee's capability to satisfy the requirements of this section.

(3) The licensee is responsible for maintaining the onsite physical protection program in accordance with Commission regulations through the implementation of security plans and written security implementing procedures.

(4) Applicants for an operating license under the provisions of part 50 of this chapter or holders of a combined license under the provisions of part 52 of this chapter, shall implement the requirements of this section before fuel is allowed onsite (protected area).

(5) [Reserved]The Tennessee Valley Authority Watts Bar Nuclear Plant, Unit 2, holding a current construction permit under the provisions of part 50 of this chapter, shall meet the revised requirements in paragraphs (a) through (r) of this section as applicable to operating nuclear power reactor facilities.

(6) Applicants for an operating license under the provisions of part 50 of this chapter, or holders of a combined license under the provisions of part 52 of this chapter that do not reference a standard design certification or reference a standard design certification issued after May 26, 2009 shall meet the requirement of § 73.55(i)(4)(iii).

(7) A licensee of a small modular reactor, as defined in 10 CFR 171.5, or non-light water reactor licensed under the provisions of part 50 of this chapter or a holder of a combined license for a small modular reactor or non-light water reactor under the provisions of part 52 of this chapter, that satisfies one or more of the eligibility criteria in § 73.55(a)(7)(i), may elect to meet one or more of the alternatives to certain security requirements as specified in § 73.55(s).

- (i) *Eligibility criteria*.
 - (A) The radiological consequences from a hypothetical, unmitigated event involving the loss of engineered systems for decay heat removal and possible breaches in physical structures surrounding the reactor, spent fuel, and other inventories of radioactive materials result in offsite doses below the reference values defined in §§ 50.34(a)(1)(ii)(D) and 52.79(a)(1)(vi) of this chapter; or
 - (B) The plant features necessary to mitigate an event and maintain offsite doses below the reference values in §§ 50.34(a)(1)(ii)(D) and 52.79(a)(1)(vi) of this chapter cannot reasonably be compromised by an adversary as defined by the design basis threat for radiological sabotage; or
 - (C) Plant features include inherent reactor characteristics combined with engineered safety and security features that allow for facility recovery and mitigation strategy implementation if a target set is compromised, destroyed, or rendered nonfunctional, such that offsite radiological consequences are maintained below the reference values defined in §§ 50.34(a)(1)(ii)(D) and 52.79(a)(1)(vi) of this chapter.
- (ii) Identification and analysis. The licensee must identify each eligibility criterion satisfied and perform and submit to the NRC an analysis that demonstrates how the identified criterion is met.

(b) * * *

(3) The physical protection program must be designed to prevent significant core damage and spent fuel sabotage. Alternatively for non-light water reactors, the physical protection program must be designed to protect against radiological sabotage as stated in § 73.1. Specifically, the program must:

(i) Ensure that the capabilities to detect, assess, interdict, and neutralize threats up to and including the design basis threat of radiological sabotage as stated in § 73.1, are maintained at all times.

- (ii) Provide defense-in-depth through the integration of systems, technologies, programs, equipment, supporting processes, and implementing procedures as needed to ensure the effectiveness of the physical protection program.
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- (s) Alternative physical security requirements.
- (1) General.
 - (i) General requirement. A licensee that satisfies at least one of the eligibility criteria in § 73.55(a)(7)(i) may implement one or more of the alternative physical security requirements set forth in § 73.55(s)(2), instead of meeting certain existing physical security requirements in § 73.55(b), (e), (i) and (k).
 - (ii) *Identification*. The licensee must identify the specific alternative physical security requirement(s) it intends to implement as part of its physical protection program.
 - (iii) Analysis. The licensee must perform and submit to the NRC an analysis demonstrating how the identified alternative physical security requirement(s) meets the applicable performance objectives set forth in § 73.55(b).
- (2) Alternative physical security requirements.
 - (i) Alternative requirements for interdiction and neutralization.
 - (A) A licensee that meets one of the eligibility requirements set forth in 10 CFR 73.55(a)(7)(i) may rely on local law enforcement to fulfill the interdiction and neutralization capabilities required by § 73.55(b)(3)(i). The licensee must maintain the capability to detect and assess threats.
 - (B) A licensee relying on local law enforcement to fulfill the interdiction and neutralization capabilities set forth in § 73.55(b)(3)(i) is relieved from the requirements in § 73.55(k)(3)-(7) relating to armed response personnel, and the requirement in § 73.55(k)(8)(ii).
 - (C) A licensee that requires no armed response personnel onsite whose primary duty is to respond to, interdict, and neutralize acts of radiological sabotage is also relieved from:
 - (1) The training and qualification requirements related to armed response personnel in 10 CFR Part 73, Appendix B, Section VI.
 - (2) The performance evaluation program requirements related to armed response personnel in 10 CFR 73, Appendix B, Section VI.C.3.

- (3) The requirements related to armed response personnel in 10 CFR Part 73, Appendix C, Section II.
- (ii) Alternative requirements for physical barriers. The licensee may utilize means other than physical barriers and barrier systems to satisfy the physical protection program design requirements of § 73.55(e). Acceptable means can be any method(s) that accomplish the intended functions of delay and access control.
- (iii) Alternative requirements for onsite secondary alarm stations.
 - (A) The licensee may have one alarm station located offsite notwithstanding the requirements in § 73.55(i)(2) to have at least two alarm stations located onsite. The central alarm station must remain onsite.
 - (B) Operating license applicants or combined license holders with one alarm station located offsite are relieved from the requirements in §§ 73.55(a)(6) and 73.55(i)(4)(iii).
- (iv) Alternative requirements for vital areas.
 - (A) The licensee is relieved from the requirement in § 73.55(e)(9)(v) to designate an offsite secondary alarm station as a vital area.
 - (B) The licensee is relieved from the requirement in § 73.55(e)(9)(vi) to locate the secondary power supply systems for an offsite secondary alarm station in a vital area.