Draft Environmental Assessment for the Proposed Rule—Advanced Reactor Security Requirements Docket No. NRC-2017-0227

U.S. Nuclear Regulatory Commission
Office of Nuclear Material Safety and Safeguards

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ABBREVIATIONS

ADAMS	Agencywide Documents Access and Management System
COL	combined license
DBT	design-basis threat
EA	environmental assessment
FR	*Federal Register*
NEI	Nuclear Energy Institute
NEPA	National Environmental Policy Act
non-LWR	nonlight-water reactor
NRC	U.S. Nuclear Regulatory Commission
PDR	Public Document Room
SMR	small modular reactor
SRM	staff requirements memorandum
SSC	structure, system, and component
STC	State and Tribal Communications

1. INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) is issuing a rule proposing amendments to the NRC's security regulations for commercial nuclear power reactors. This proposed rule would provide alternatives to specific security requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage."[1] for advanced reactors. In this document, the term "advanced reactors" refers to light-water small modular reactors (SMRs) and non-light-water reactors (non-LWRs). The proposed rule would provide a clear set of voluntary, performance-based, alternative physical security requirements to certain existing physical security requirements. Advanced reactor applicants and licensees meeting the eligibility criterion set forth in the proposed rule could elect to implement one or more of these alternative physical security requirements, thereby reducing the need for reliance on the existing exemption and alternative measures processes in 10 CFR 73.55.

The proposed rule would apply to advanced reactors licensed under 10 CFR Part 50, "Domestic Licensing of Production or Utilization Facilities," or 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." Under the proposed rule, an eligible applicant for an operating license (OL) or a combined license (COL) that elects to use the alternative requirements would be required to perform a technical analysis and describe that analysis in their OL or COL application, respectively. An eligible holder of an OL or COL that elects to use the alternative requirements would also perform the technical analysis but would not be required to submit it to the NRC for review and approval. Instead, the analysis would be subject to NRC audit or inspection. Under the current provisions of 10 CFR 73.55(r), applicants

[1] As given in 10 CFR 73.2, "Definitions," radiological sabotage means any deliberate act directed against a plant or transport in which an activity licensed pursuant to the regulations in 10 CFR Part 73, "Physical Protection of Plants and Materials," is conducted, or against a component of such a plant or transport that could directly or indirectly endanger public health and safety by exposure to radiation.

for and holders of nuclear power reactor licenses under 10 CFR Part 50 or 10 CFR Part 52 may apply for NRC approval to use alternative measures similar to those in the proposed rule for meeting the prescribed requirements in 10 CFR 73.55.

This agency action would apply the insights from recent advances in reactor design and safety research, retain the NRC's overall security regulations framework for commercial nuclear power reactors, and provide alternatives and associated guidance for specific physical security requirements. The current requirements in conjunction with these proposed revisions to the security regulations in 10 CFR 73.55 would continue to provide adequate protection of public health and safety and the common defense and security.

1.1 Background

As stated in the Commission's "Policy Statement on the Regulation of Advanced Reactors," dated October 14, 2008 (73 FR 60612), "[T]he Commission expects that advanced reactors will provide enhanced margins of safety and/or use simplified, inherent, passive, or other innovative means to accomplish their safety and security functions." Inherent features of advanced reactor designs could include lower fission product inventories and longer thermal time constants, as well as inherent passive safety characteristics such as natural circulation decay heat removal, below-grade or in-ground construction, integral primary systems, and advanced fuel types.

Consistent with the Commission's policy statement, in Staff Requirements Memorandum (SRM)-SECY-18-0076, "Staff Requirements—SECY-18-0076—Options and Recommendations for Physical Security for Advanced Reactors," dated November 19, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18324A478), the Commission approved the staff's recommendation to initiate a limited-scope rulemaking for advanced reactor physical security. Consistent with the rulemaking plan approved in the SRM, the proposed rule would establish a risk-informed, consequence-based approach with an

associated eligibility criterion to assess and address physical security requirements that rely on human interactions for the interdiction and neutralization of adversaries, requirements related to physical barriers, the need for armed responders, and prescriptive requirements for an onsite secondary alarm station and physical barriers. Intended primarily for large light-water reactors, the current prescriptive requirements relating to the minimum number of armed responders are included in 10 CFR 73.55(k)(5)(ii), while requirements relating to onsite secondary alarm stations are contained within 10 CFR 73.55(i)(4)(iii). The physical protection program design requirements of 10 CFR 73.55(e) address physical barriers.

Advanced reactors licensed under 10 CFR Parts 50 and 52 are subject to the regulatory framework and physical security requirements in 10 CFR 73.55. This regulatory framework requires licensees to protect against the design basis threat of radiological sabotage. To achieve this, a license's physical protection program must implement the security requirements in 10 CFR 73.55 to enable a licensee to prevent significant core damage and spent fuel sabotage. Given the anticipated enhanced designs and engineered safety features of advanced reactors, applying some of these security requirements to advanced reactors may not be necessary and would potentially impose an unnecessary burden. Therefore, this proposed rule provides a set of voluntary alternative physical security requirements that eligible advanced reactor applicants and licensees may elect to implement. The rulemaking applies a technology-inclusive approach to advanced reactors to accommodate a variety of facility designs. The technical basis for a process to allow advanced reactors to apply to use alternatives to current physical security requirements is the potential combination of enhanced safety and security features incorporated into the advanced reactor designs that reduce reliance on human actions to mitigate attempted acts of radiological sabotage as compared to reactors currently licensed under 10 CFR Part 50 and 10 CFR Part 52.

The NRC staff developed this environmental assessment (EA) to evaluate the environmental impacts of the proposed rule and document the staff's finding of no significant

impact in accordance with the requirements of 10 CFR 51.21, “Criteria for and identification of licensing and regulatory actions requiring environmental assessments,” and the National Environmental Policy Act of 1969, as amended (NEPA). The rulemaking would retain the current overall framework for security requirements but provide certain alternative physical security requirements commensurate with the risks associated with advanced reactors. This EA focuses on those aspects of the limited-scope security rulemaking for which there is a potential for the revised requirements to affect the environment. As the staff noted in SECY-10-0034, “Potential Policy, Licensing, and Key Technical Issues for Small Modular Nuclear Reactor Designs,” dated March 28, 2010 (ADAMS Package Accession No. ML093290245), establishing physical security requirements and guidance for SMRs and non-LWRs is a key policy issue of high importance.

This rulemaking would amend the security requirements for advanced reactors and revise 10 CFR 50.34, 50.54, 52.79, and 73.55, and Appendix B, “General Criteria for Security Personnel,” to 10 CFR Part 73. It would remove and reserve 10 CFR 73.55(a)(5), modify 10 CFR 73.55(b)(3), and add a new 10 CFR 73.55(s) providing certain alternative physical security requirements that advanced reactor applicants and licensees could elect to use. For consistency with these changes, the NRC would modify 10 CFR 73.55(b)(9), 10 CFR 73.55(e)(10), 10 CFR 73.55(k)(1), and Appendix B, Section VI.A, to 10 CFR Part 73 and would add the new 10 CFR 50.34(c)(4), 52.79(a)(35)(iii), and 50.54(p)(5) to conform to the proposed performance objective and requirements for SMR and non-LWR technologies.

1.2 Proposed Action

The proposed action is a rulemaking that would add new alternative physical security requirements and guidance specifically for advanced reactor applicants and licensees. Advanced reactor applicants and licensees would be required to develop a technical analysis to determine if they are eligible to use the alternative physical security requirements being

proposed in this rulemaking. This rulemaking would enable an eligible applicant or licensee to elect to implement certain alternative requirements concerning interdiction and neutralization, physical barriers, secondary alarm station location, and vital area designations for secondary alarm station. For example, fewer than the currently required number of 10 armed responders as specified in 10 CFR 75.55(k)(5)(ii), or even zero responders, could be allowed under the new specified performance criterion in 10 CFR 75.55(s).

1.3 Purpose and Need for Proposed Action

Current physical security regulations address the security challenges related to power reactors licensed under 10 CFR Part 50 and 10 CFR Part 52. These security regulations are based on requirements that may not be appropriate for advanced reactors given advances in reactor design and engineered safety features. The rulemaking provides alternatives related to prescriptive physical security requirements for advanced reactors. The rulemaking would (1) promote regulatory stability, predictability, and clarity, (2) reduce the need for future advanced reactor applicants to request exemptions from certain physical security requirements, (3) recognize technology advancements and design features associated with the NRC-recommended attributes of advanced reactors, and (4) provide alternatives to existing security requirements with risk-informed, consequence-based requirements.

1.4 Significant Changes in the Proposed Rule

The staff noted in SECY-11-0184, “Security Regulatory Framework for Certifying, Approving, and Licensing Small Modular Nuclear Reactors (M110329),” dated December 29, 2011, that 10 CFR 73.55(r), “Alternative measures,” allows SMR and non-LWR designers and potential licensees to propose alternative methods or approaches that are equivalent in performance and meet the intended functions of the performance-based and prescriptive security requirements under 10 CFR 73.55; however, the process results in a case-by-case regulation of advanced reactors. The alternative physical security requirements

proposed in this new rule would 1) enhance regulatory effectiveness by providing greater stability, predictability, and clarity in the licensing process for implementing physical security for advanced reactors; 2) reduce requests for exemptions from certain physical security requirements; 3) consider technological advancements in reactor designs and their associated design features impacting the possible loss of safety functions from malicious acts and any resulting consequences; and 4) provide alternatives for meeting physical security requirements commensurate with the risks posed by advanced reactors.

The alternative methods or approaches in this proposed rule may include increased reliance on engineered systems that reduce dependence on operational requirements and staffing to meet the intent of the regulatory requirements. This rulemaking builds on these alternative measures by proposing an eligibility criterion and associated alternative physical security requirements consistent with the enhanced safety and security features of SMRs and non-LWRs, as well as stakeholder comments. As described below, this proposed rule contains significant alternatives to certain requirements in 10 CFR 73.55.

1.4.1 Administrative

A proposed administrative change includes the removal of an outdated reference to the Tennessee Valley Authority's Watts Bar Nuclear Plant, Unit 2, construction permit in 10 CFR 73.55(a)(5), which is proposed to be designated as "Reserved."

1.4.2 General Requirements

The proposed rule would establish a new requirement in 10 CFR 75.55(b)(3) for advanced reactor physical security protection programs. Additionally, it would establish an eligibility criterion that if met would allow an advanced reactor applicant or licensee to elect to implement one or more of the new voluntary alternative physical security requirements in 10 CFR 73.55. An advanced reactor applicant or licensee would have to demonstrate eligibility by performing a technical analysis that meets the specified criteria in proposed

10 CFR 73.55(s)(1)(ii). In addition, the applicant or licensee would identify the specific alternative physical security requirement(s) it intends to implement as part of its physical protection program and demonstrate how the requirements set forth in 10 CFR 73.55 are met when the selected alternatives are used.

For an SMR or non-LWR licensee to be eligible to use the alternative requirements, the physical protection program would need to prevent a significant release of radionuclides from any source. For a licensee holding an operating license under the provisions of 10 CFR Part 50 or a COL under the provisions of 10 CFR Part 52 for a light-water reactor other than an SMR, as defined in 10 CFR 171.5, "Definitions," the physical protection program must prevent significant core damage and spent fuel sabotage consistent with existing regulatory requirements. The proposed rule would not relieve licensees from the requirements to interdict and neutralize threats up to and including the design-basis threat (DBT)[2] for radiological sabotage, but it would authorize an alternative method that licensees could use to fulfill these requirements as described in the new 10 CFR 73.55(s) discussed below.

1.4.3 Alternative Physical Security Requirements

The proposed rule would establish new 10 CFR 73.55(s) for the specific alternative physical security requirements available to those advanced reactor applicants and licensees who have met the proposed general requirements for utilizing any of the alternative requirements contained in proposed 10 CFR 73.55(s)(1). General provisions in proposed 10 CFR 73.55(s)(1)(i) would describe applicability while proposed 10 CFR 73.55(s)(1)(ii) and 10 CFR 73.55(s)(1)(iii) would permit licensees to implement alternative security requirements if the criterion in 10 CFR 73.55(b)(3) is satisfied and the licensee identifies specific alternatives that are intended to be implemented and performs a technical analysis demonstrating how the alternative security requirements meet the performance objective in 10 CFR 73.55(b)(3),

[2] The DBT is a profile of the type, composition, and capabilities of an adversary. The NRC describes the DBT of radiological sabotage in 10 CFR 73.1(a).

provided that the consequences of a postulated radiological release for a postulated security initiated event do not exceed the offsite dose reference values defined in 10 CFR 50.34 and 10 CFR 52.79. The licensee would be required to maintain the technical analysis until the NRC has docketed the licensee's certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel required by 10 CFR 50.82(a)(1) or 10 CFR 52.110(a).

The proposed rule would provide voluntary alternative physical security requirements in proposed 10 CFR 73.55(s)(2) to selected requirements currently in 10 CFR 73.55 for a licensee satisfying the provisions of proposed 10 CFR 73.55(s)(1). Within the proposed new 10 CFR 75.55(s)(2)(i), a licensee that meets the requirements of 10 CFR 73.55(s)(1)(i) may be relieved from meeting the minimum number of armed responders as specified in 10 CFR 73.55(k)(5)(ii).The proposed new 10 CFR 75.55(s)(2)(ii) would permit a licensee to have no armed response personnel on site whose primary duty is to respond to, interdict, and neutralize acts of radiological sabotage. Alternative requirements for interdiction and neutralization would permit licensees to rely on law enforcement or other offsite armed responders to fulfill the interdiction and neutralization capabilities required by 10 CFR 73.55(b)(3)(i); however, the licensee would maintain the capability to detect and assess threats and protect against the DBT at all times while providing adequate delay to enable law enforcement and other offsite armed responders to interdict and neutralize threats up to and including the DBT. The licensee would provide the necessary information and training to law enforcement or other offsite armed responders for interdiction and neutralization against the DBT. Additionally, the licensee would describe how law enforcement or other offsite armed responders meet the requirements related to armed response personnel in 10 CFR Part 73, Appendix C, "Licensee Safeguards Contingency Plans," Section II, "Nuclear Power Plant Safeguards Contingency Plans."

The licensee's technical analysis would be required to include an evaluation that describes the impact that the degradation or absence of law enforcement or other offsite armed

responders fulfilling the interdiction and neutralization capabilities would have on the overall physical protection program, including physical security. This evaluation would include compensation measures to remedy any degradation consistent with the requirements of 10 CFR 73.55(o).

If a licensee were to rely on law enforcement or offsite armed responders to fulfill interdiction and neutralization capabilities, then the license would be relieved from the requirements in 10 CFR 73.55(k)(3) through (k)(7) relating to armed response personnel and the requirement in 10 CFR 73.55(k)(8)(ii) for the minimum number of armed responders. A licensee that requires no onsite armed response personnel whose primary duty is to interdict and neutralize acts of radiological sabotage would also be relieved from the training and qualification requirements for armed response personnel within 10 CFR Part 73, Appendix B, "General Criteria for Security Personnel," Section VI, "Nuclear Power Reactor Training and Qualification Plan for Personnel Performing Security Program Duties," with the exception of the performance evaluation program requirements related to armed response personnel in 10 CFR Part 73, Appendix B, Section VI.C.3, which applies for all armed response personnel, including law enforcement. The NRC would also provide relief for the requirement related to armed response personnel in 10 CFR Part 73, Appendix C, Section II.B.3.c.(iv).

1.4.4 Alternative Requirements for Physical Barriers

The proposed new requirement in 10 CFR 73.55(s)(2)(iii) would permit a licensee to utilize means other than physical barriers and barrier systems to satisfy the physical protection program design requirements with acceptable means consisting of any methods that accomplished the delay and access control functions necessary to allow the licensee to protect against a significant release of radionuclides from any source.

1.4.5 Alternative Requirements for Secondary Alarm Stations

The requirement in the proposed new 10 CFR 73.55(s)(2)(iv) would permit the licensee to locate the secondary alarm system offsite, notwithstanding the requirements in 10 CFR 73.55(i)(2) to have at least two alarm stations located on site; however, the central alarm system must remain on site. Licensees implementing this alternative requirement would be relieved from the requirements of 10 CFR 73.55(i)(4)(iii) if the secondary alarm station is located offsite.

1.4.6 Alternative Requirements for Vital Areas

The licensee implementing the alternative requirement in proposed new 10 CFR 73.55(s)(2)(v) would be relieved from the requirements in 10 CFR 73.55(e)(9)(v) to designate an offsite secondary alarm station as a vital area and the requirement in 10 CFR 73.55(e)(9)(vi) to locate the secondary supply systems for an offsite secondary alarm station in a vital area.

1.5 Conforming Changes

The rulemaking would make conforming changes to the requirements listed below to ensure that the performance objective for non-LWRs and SMRs in proposed 10 CFR 73.55(b)(3) would be consistently applied throughout 10 CFR 73.55.

10 CFR 73.55(b)(9). The proposed rule accommodates advanced reactor technologies that may not be susceptible to core damage but may be vulnerable to the release of radionuclides from any source due to the DBT of radiological sabotage. Proposed changes would ensure that the existing requirements are preserved while providing for the technologies of non-LWRs and SMRs.

10 CFR 73.55(e)(10) (physical barriers). The proposed rule accommodates advanced reactor technologies that may not be susceptible to core damage but may be vulnerable to the release of radionuclides from any source due to the DBT of radiological sabotage from the

effects of a land vehicle bomb that could directly or indirectly endanger public health and safety by exposure to radiation. Proposed changes would preserve the existing requirements while providing for the technologies of non-LWRs and SMRs.

10 CFR 73.55(k)(1) (response requirements). The proposed rule accommodates advanced reactor technologies that are not susceptible to core damage but may be vulnerable to radiological sabotage of a plant component that could directly or indirectly endanger public health and safety by exposure to radiation from any source. Proposed changes would preserve the existing requirements while providing for the technologies of non-LWRs and SMRs.

Appendix B to 10 CFR Part 73. The proposed changes to Appendix B to 10 CFR Part 73, would include the implementation of documented NRC-approved security training and qualification plans by all personnel assigned to prevent a significant release of radionuclides from any source. These plans include licensee response strategy and implementing procedures that meet minimum training and qualification requirements to ensure each individual possesses the knowledge, skills, and abilities required to effectively perform the assigned duties and responsibilities. The plans would also require that personnel be trained on the skills necessary to prevent a significant release of radionuclides for the new advanced reactor technologies.

10 CFR 50.54, "Conditions of licenses." An amendment to this subsection as 10 CFR 50.54(p)(5) would account for reporting requirements to demonstrate how a licensee would continue to meet the applicable criteria of the new rule given changes in facility features or offsite support resources subsequent to completion of an initial site-specific technical analysis.

10 CFR 50.34(c)(4) and 10 CFR 52.79(a)(35)(iii)

The same new paragraph would be added to 10 CFR 50.34 and 10 CFR 52.79 to require each applicant electing to apply an alternative physical security requirement in proposed 10 CFR 73.55(s)(2) to provide a description of the technical analysis required by proposed 10

CFR 73.55(s)(1)(iv). The technical analysis would not need to be submitted to the NRC for review and approval but would be subject to audit or inspection.

2. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

This EA focuses on those aspects of the proposed rulemaking for which there is a potential for the revised requirements to affect the environment. The NRC has concluded that there will be no significant radiological environmental impacts associated with implementation of the proposed limited-scope security rule requirements for the following three reasons:

(1) The proposed alternative requirements for physical security would provide an equivalent level of security as that for the existing requirements; therefore, the environmental impacts would be the same because the resulting risk is similar regardless of which requirement (current or proposed) is utilized.

(2) The proposed alternatives to the existing physical security requirements in 10 CFR 73.55would not result in changes to the design-basis requirements for the protection of structures, systems, and components (SSCs) in a potential licensee's facilities that function to limit the release of radiological effluents during and following postulated accidents. All the SSCs associated with limiting the releases of offsite radiological effluents would therefore continue to be able to perform their functions, and as a result, there would be no significant radiological effluent impact in that there would be no significant release of radionuclides from any source.

(3) The standards and requirements applicable to radiological releases and effluents would not be affected by the limited-scope security rulemaking and would continue to apply to the SSCs affected by the limited-scope security rulemaking.

The principal effect of this action would be to provide voluntary alternative physical security requirements appropriate for advanced reactors and add requirements consistent with

the rulemaking performance objective and requirements as discussed above. None of the revisions would affect current occupational exposure requirements; consequently, the NRC has concluded that this action would have no impact on occupational exposure.

For the reasons discussed above, the action would not significantly increase the probability or consequences of accidents, nor result in changes to the types of any effluents that may be released offsite, and there would be no significant increase in occupational or public radiation exposure. The alternative security methods of the proposed rule would provide a level of security equivalent to that for the existing requirements; therefore, the environmental impacts would be the same because the resulting risk is similar.

The United States Court of Appeals for the Ninth Circuit held that the NRC could not categorically refuse to consider the consequences of a terrorist attack in an analysis under NEPA. As described above, the new security requirements for advanced reactors would have a level of protection comparable to that of the existing requirements. Under the proposed rule and associated guidance ("Guidance for Alternative Physical Security Requirements for Small Modular Reactors and Non-Light-Water Reactors," ADAMS Accession No. ML20041E037 and "Target Set Identification and Development for Nuclear Power Reactors," ADAMS Accession No. ML22021B529), the NRC would review the information provided in the license application for an advanced reactor to ensure the applicant has demonstrated how the requirements set forth in 10 CFR 73.55 are met when the selected alternatives are used. This is consistent with the existing regulatory requirements under 10 CFR Part 73. Therefore, an act of terrorism evaluation for advanced reactors would have a similar result to a bounding licensing-basis event evaluated for compliance with the existing physical protection requirements under 10 CFR Part 73 based on adequate justification provided in an analysis submitted by an applicant or a licensee.

With regard to potential nonradiological impacts, implementation of the rule requirements would not have a significant impact on the environment. In addition, the revised requirements

would not affect any historic sites and would not affect nonradiological plant effluents. Therefore, there would be no significant nonradiological environmental impact associated with this proposed rule action. Accordingly, the NRC finds that there would be no significant environmental impact associated with this rulemaking action.

3. ENVIRONMENTAL IMPACTS OF THE ALTERNATIVE TO THE PROPOSED ACTION

Under the no-action alternative (i.e., the status quo), the regulations would not change. As stated in Section 2 of this EA, the proposed rule would not result in a significant impact on the environment. Therefore, there would be no difference in environmental impacts between the no-action alternative and the proposed rule. The only difference would be in the costs attributable to reviewing the environmental impacts of exemption and license amendment requests under the no-action alternative. Under the no-action alternative, an applicant or licensee for an advanced reactor technology would have to comply with the existing regulations, request an exemption from the regulations, or use the 10 CFR 73.55(r) process, which involves a license amendment request. The NRC would analyze the environmental impacts of exemptions and license amendment requests on a case-by-case basis. Therefore, the averted costs (benefits) of the rulemaking would not occur. The staff describes the costs and benefits of the no-action alternative and the proposed action in the regulatory analysis for the proposed rule (ADAMS Accession No. ML21334A007).

4. STAKEHOLDERS CONSULTED

The NRC developed the proposed rule and this draft EA. The NRC is requesting public comment on this draft EA. The NRC may hold a public meeting during the proposed rule comment period to allow stakeholders to ask questions about the proposed rule and this EA. The NRC will consider comments received on the docket as it develops the final rule and the final EA. The NRC will issue the final EA when it publishes the final rule.

During the development of this proposed rule, the NRC conducted public meetings and other interactions with stakeholders on issues related to the advanced reactor physical security requirements rulemaking. To provide notice of the publication of the proposed alternative security requirements for SMRs and non-LWRs, the NRC intends to issue a State and Tribal Communications (STC) letter no later than 2 days after the proposed rule's publication in the *Federal Register.* The letter would be sent to all Agreement States, non-Agreement States, State Liaison Officers, and Federally recognized Tribes requesting comment on the proposed rule (ADAMS Accession No. ML22045A054). Table 1 in Section 6 of this EA provides details about stakeholder interactions and the STC letter.

5. FINDING OF NO SIGNIFICANT IMPACT

Based on the EA, the NRC staff finds that the proposed action would not have a significant effect on the quality of the human environment. Accordingly, the NRC staff is not required to prepare an environmental impact statement for the proposed action. Documents may be examined, and copied for a fee, at the NRC Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, MD 20852. Publicly available records are accessible electronically from the ADAMS Public Electronic Reading Room on the NRC Web site at https://www.nrc.gov/reading-rm/adams.html. Persons who do not have access to ADAMS or who encounter problems in accessing the documents in ADAMS should contact the NRC PDR reference staff at (800) 397-4209 or (301) 415-4737 or send an e-mail to pdr@nrc.gov.

6. STAKEHOLDER INTERACTIONS

Table 1 lists the interactions between the NRC and stakeholders during public meetings and associated correspondence on issues related to the proposed rule and alternative requirements.

Table 1. NRC and Stakeholder Interactions

Date	Action
December 14, 2016	The NEI submitted a white paper, "Proposed Physical Security Requirements for Advanced Reactor Technologies," to the NRC for consideration in developing requirements to address the inherently safer features of advanced reactors (ML17026A474). Location N/A
December 13, 2017	NRC met with the nuclear industry and other stakeholders for input on possible modifications to regulatory requirements related to physical security for advanced reactor designs (light-water small modular reactors and non-light-water reactors) (ML17334A212). Location: NRC Headquarters, Rockville, MD 20852
July 16, 2019	The NRC published a notice in Volume 86 of the *Federal Register* (FR), page 33861 (84 FR 33861), requesting comment on the regulatory basis to support a rulemaking that would amend the NRC's regulations to develop specific physical security requirements for advanced reactors. The comment period closed August 15, 2019, and the NRC received four comments supporting the basis and two comments opposing the basis. The staff addressed comments on the regulatory basis for the proposed rule when developing a draft of the proposed rule. Location: N/A
August 8, 2019	The NRC held a public meeting to discuss information on the scope and related costs and benefits associated with the proposed rulemaking on physical security for advanced reactors (ADAMS Accession No. ML19221B611). The staff considered feedback obtained at the meeting during the development of the proposed rule. Location: NRC Headquarters, Rockville, MD 20852
December 12, 2019	The NRC held a public meeting with the nuclear industry and other stakeholders to discuss initiatives within the industry and the NRC related to the development and licensing of non-LWRs (ADAMS Accession No. ML19344D035). The proposed rule for alternative physical security for advanced reactors was a topic of these discussions, and the staff considered the comments and feedback obtained at the meeting and from subsequent correspondence in the development of the proposed rule. Location: NRC Headquarters, Rockville, MD 20852
February 20, 2020	The NRC held a public meeting to discuss with the nuclear industry and other stakeholders the initiatives within the industry and the NRC related to the development and licensing of non-LWRs. This included information on alternative security requirements for advanced reactors (ADAMS Accession No. ML20054A703). Location: NRC Headquarters, Rockville, MD 20852
April 13, 2020	The NRC received a draft of Nuclear Energy Institute (NEI) 20-05, "Methodological Approach and Considerations for a Technical Analysis to Demonstrate Compliance with the Performance Criteria of 10 CFR 73.55(a)(7)," issued April 2020, from the NEI that was intended as industry guidance for meeting alternative security requirements (ADAMS Accession No. ML20107D894). The document is public and was made available for the staff's review and comment. Location: N/A

Date	Action
April 22, 2020	The NRC held a public meeting to discuss the draft proposed rule text and the NRC staff's disposition of public comments screened out of this rulemaking related to the development of alternative physical security requirements for non-LWRs and SMRs (ADAMS Accession No. ML20112F411). The staff considered the feedback obtained at the meeting for revisions to the proposed rule. Location: Virtual meeting
May 26, 2020	The NRC received a letter dated May 26, 2020 (ADAMS Accession No. ML20154K704), from the NEI articulating the industry position as stated during the April 22, 2020, public meeting for consideration in revising the proposed rule. The staff considered the NEI's letter in revisions to the proposed rule. Location: N/A
September 17, 2020	The NRC followed up (ADAMS Accession No. ML20212L397) on comments in the NEI letter dated May 26, 2020 (ADAMS Accession No. ML20154K704), and in response published a modified preliminary proposed rule notice of availability in the *Federal Register* on September 14, 2020 (85 FR 56548). Location: N/A
April 21, 2021	The NRC held a public meeting to discuss the draft NEI implementation guidance document (NEI 20-05) related to the proposed rulemaking (ADAMS Accession No. ML21105A510). Location: Virtual meeting
May 14, 2021	The NRC held a public meeting to discuss issues and clarifications related to the draft implementation guidance document (NEI 20-05) on the proposed rulemaking for alternative physical security requirements for non-LWRs and SMRs (ADAMS Accession No. ML21124A174). Location: Virtual meeting
August 17, 2021	The NRC held a meeting (ADAMS Accession No. ML21218A150) to discuss the regulatory issues and clarifications related to the draft implementation guidance documents (draft NEI 20-05 and potential revision to Regulatory Guide 5.81, "Target Set Identification and Development for Nuclear Power Reactors (OUO-SRI)," Revision 1, issued December 2019). Location: Virtual meeting
September 16, 2021	The NRC held a public meeting to discuss the draft eligibility criteria related to the alternative physical security requirements for non-LWRs and SMRs proposed rule (ADAMS Accession No. ML21246A143). Location: Virtual meeting
October 19, 2021	The NRC held a public meeting (ADAMS Accession No. ML21279A152) to discuss the latest preliminary proposed rule language and the eligibility criteria related to the alternative physical security requirements for non-LWRs and SMRs proposed rule. Location: Virtual meeting
October 29, 2021	In a letter dated October 29, 2021, the NEI notified the NRC that it will cease the development of NEI 20-05 with guidance related to the proposed rule and will defer to the NRC staff to develop the guidance (ADAMS Accession No. ML21306A365). In a response letter dated November 24, 2021 (ADAMS Accession No. ML21307A120), the NRC notified the NEI that it will cease its review of NEI 20-05. Location: N/A

Date	Action
January 20, 2022	NRC held a public meeting to present the revised preliminary proposed rule, requirements and key elements of the rule, and guidance documents while responding to questions and comments from attendees (ML21336A510). Location: Virtual Meeting
<<Date>>	The NRC published a notice in the *Federal Register* (XX FR XXXXX) requesting comments on the proposed rule. The NRC notified the Tribal nations and the States of this notice in an STC letter dated MM DD, YYYY (STC-XX-XXX) (ADAMS Accession No. ML22045A054). Location: N/A