

July 27, 2026

Subject: Comment on Modernizing Security Requirements [Docket ID NRC-2025-1303; RIN 3150-AL53.]

The Breakthrough Institute (BTI) appreciates this opportunity to comment on the U.S. Nuclear Regulatory Commission's proposed rule, *Modernizing Security Requirements*.¹ BTI is an independent 501(c)(3) global research center that advocates for appropriate regulation and oversight of nuclear reactors to enable the new and continued use of safe and clean nuclear energy. BTI acts in the public interest and does not receive funding from industry.

BTI supports the NRC's proposed transition toward consequence-based, technology-inclusive, and performance-based security regulations. The proposed rule would better align security obligations with facility-specific consequences, design features, engineered protections, and demonstrated performance, while reducing reliance on requirements developed primarily for large light-water reactors. BTI has participated in the NRC's related rulemakings on physical security requirements for advanced reactors, including its 2024 comment on alternative physical security requirements permitting flexible onsite, offsite, and combined armed response.² This comment draws on that record and addresses each of the proposed rule's four major provisions: fitness-for-duty programs, independent spent fuel storage installation (ISFSI) security, physical security requirements, and facility security clearance and safeguarding of national security information, as well as each of NRC's specific requests for comment.

This rule is not being promulgated in isolation. The NRC is concurrently advancing several related rulemakings in response to Executive Order 14300³ that share definitions, technical assumptions, and reporting provisions with this proposed rule. The final rule must be coherent with those actions rather than create inconsistent treatment of comparable facilities or conflicting amendments to shared provisions.

¹ U.S. Nuclear Regulatory Commission, *Modernizing Security Requirements*, 91 Fed. Reg. 38928, (Docket ID NRC-2025-1303; RIN 3150-AL53), June 26, 2026, <https://www.federalregister.gov/documents/2026/06/26/2026-12989/modernizing-security-requirements>

² Spencer Toohill, The Breakthrough Institute, *Comment on Alternative Physical Security Requirements for Advanced Reactors*, (Docket ID NRC-2017-0227), October 23, 2024, <https://www.regulations.gov/comment/NRC-2017-0227-0057>

³ Executive Order 14300, "Ordering the Reform of the Nuclear Regulatory Commission," 90 Fed. Reg. 22587, May 29, 2025, <https://www.federalregister.gov/d/2025-09798>

I. SUMMARY OF RECOMMENDATIONS

BTI recommends that the NRC finalize the rule with targeted clarifications that are technically defensible, administratively usable, and durable across related rulemakings. In particular, the final rule should:

1. Finalize the proposed Part 26 modernizations while preserving program integrity and implement sequestration requirements through a performance-based, technology-inclusive framework.
2. Apply ISFSI security requirements according to facility risk and radiological consequences.
3. Finalize the dose-based, graded target-set framework in § 73.55 with clear analytical and reevaluation requirements.
4. Allow flexible onsite, offsite, or combined armed response based on demonstrated performance.
5. Provide a coherent implementation framework across Parts 50, 52, 53, 72, and 73.

II. FITNESS-FOR-DUTY (PART 26)

Targeted Modernization Should Be Adopted While Preserving Program Integrity

BTI generally supports the NRC's proposed modernization of the fitness-for-duty requirements in 10 CFR part 26. The proposed changes appropriately reduce unnecessary burden while preserving program effectiveness, including through expanded oral-fluid testing, revised random-testing rates, construction-program flexibility, and updated blind performance testing. However, there are several issues that need clarification before the rule is finalized.

First, the nominal 24-month refresher-training interval, including any permitted scheduling extension, should apply only to routine training and should not permit a licensee to defer event-driven retraining when performance deficiencies, procedural changes, audit findings, regulatory changes, or operating experience demonstrate that earlier training is warranted.

Also, it is reasonable that the NRC propose to permit fatigue assessments to be conducted remotely through electronic communications. However, the final rule or accompanying guidance

should more clearly define the responsibilities of the onsite individual, including the observations required, the information that must be conveyed to the remote assessor, and the circumstances requiring an in-person evaluation. If the NRC cannot identify a distinct safety-significant function for the onsite individual, it should permit fully remote assessments where the assessor can obtain sufficient information to make a reliable determination.

What's more, the proposed elimination of the § 26.41(c)(2) requirement that licensees annually audit their HHS-certified laboratories should be reconsidered in one respect before the rule is finalized. The NRC's stated basis is that the National Laboratory Certification Program's twice-yearly inspections make the licensee audit redundant. The preamble itself, however, states that National Laboratory Certification Program (NLCP) inspections evaluate the *majority* of laboratory services and functions relevant to part 26 licensees; not all of them.⁴ The NRC should identify any laboratory functions not covered by National Laboratory Certification Program inspections and determine whether § 26.168 blind performance testing adequately addresses them. If a residual gap exists between what NLCP inspects and what the licensee audit currently catches, the NRC should retain a targeted verification requirement.

Sequestration Flexibility Should Be Performance-Based and Technology-Inclusive

BTI supports the NRC's proposed sequestration provisions, which appropriately establish alternative work-hour controls and fatigue-management measures to maintain reasonable assurance of fitness-for-duty during prolonged events that require personnel to remain onsite. The final rule should adopt a performance-based framework that focuses on maintaining personnel readiness rather than prescribing a specific, legacy staffing structure.

This clarification is particularly important for advanced reactors with materially different operating characteristics. Many advanced-reactor designs rely on smaller operating crews, greater automation, passive safety features, and reduced reliance on immediate operator action. As a result, they may be able to maintain all credited safety and security functions with fewer sequestered personnel than would be appropriate for a conventional reactor. An advanced

⁴ IV.A.(i)(h) Licensee Audits of HHS-Certified Laboratories, U.S. Nuclear Regulatory Commission, Modernizing Security Proposed Rule, 91 Fed. Reg. 38928, (Docket ID NRC-2025-1303; RIN 3150-AL53), June 26, 2026, <https://www.federalregister.gov/documents/2026/06/26/2026-12989/modernizing-security-requirements>

reactor that can demonstrate compliance with the applicable work-hour controls and fatigue-management requirements using its approved staffing model should not be expected to maintain sequestration levels based on legacy reactor designs.

Recommendation

The NRC should finalize the proposed Part 26 changes that reduce unnecessary burden while maintaining program effectiveness. The final rule or accompanying guidance should clarify that the nominal 24-month refresher-training interval does not limit event-driven retraining; identify and address any laboratory functions not covered by NLCP inspections or § 26.168 blind performance testing; and ensure that implementation of the sequestration provisions is technology-inclusive and performance-based. Compliance should be evaluated against a licensee's approved licensing basis and demonstrated ability to satisfy the Part 26 fatigue-management requirements using its approved staffing model, credited human actions, and facility-specific risk profile, rather than staffing assumptions developed for conventional reactors.

III. SECURITY REQUIREMENTS FOR INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS (PARTS 72/73)

BTI supports the proposed changes allowing eligible general-license independent spent fuel storage installations located outside an operating reactor's protected area, including qualifying decommissioning sites with all spent fuel in dry storage, to comply with § 73.51 rather than § 73.55. Dry-storage-only facilities do not contain a fueled reactor or present the reactor-related target sets that support application of the design-basis-threat requirements in § 73.55. Applying § 73.51 therefore retains an appropriate security framework while better aligning the requirements with the facility's risk profile.

BTI also supports eliminating the associated exemption and alternative-measures process. Requiring licensees to obtain case-specific approval to implement the security framework that the proposed rule recognizes as generally appropriate imposes an unnecessary administrative step.

It would be useful for the final rule to explain the technical basis for the 12-month security-plan-change reporting interval. Limiting the extension to changes that do not decrease plan effectiveness supports delayed reporting, but does not by itself explain why 12 months is the appropriate interval. The NRC took a similar approach in the proposed 6-month physical inventory cycle for unattended HALEU facilities under the pending Part 57 rulemaking, where BTI raised the same point.⁵ A brief explanation of the operational or risk basis for the chosen interval would remove any appearance that the number was set solely for administrative convenience.

Recommendation

The NRC should finalize the proposed changes allowing eligible general-license ISFSIs to comply with § 73.51 rather than § 73.55 and eliminating the associated exemption and alternative-measures process. The final rule should also explain the technical or risk basis for the 12-month security-plan-change reporting interval.

IV. PHYSICAL SECURITY REQUIREMENTS (PART 73)

The delayed sequencing of this rulemaking required the NRC to address security modernization incrementally in Part 53 before broader Part 73 modernization. The NRC incorporated several physical security, cybersecurity, and access authorization provisions directly into Part 53, including proposed §§ 73.100, 73.110, and 73.120. As such, the proposed rule allows new Part 50 and 52 applicants to reference those sections from the Part 53 framework.

Completing the Part 73 modernization first would have provided a simpler framework applicable to all licensing pathways rather than a solution tailored principally to Part 53 and would have resulted in fewer multiple regulatory initiatives. The following discussion and recommendations reconcile security modernizations within Part 53 with the proposed rule.

Performance Objective and Achievable Target Sets (§73.55)

BTI supports the replacement of the significant-core-damage standard in § 73.55(b)(3) with a dose-based performance objective and the adoption of the proposed graded framework based on

⁵ The Breakthrough Institute, *Comment on Licensing Requirements for Microreactors and Other Reactors with Comparable Risk Profiles*, NRC-2025-0379, June 15, 2026, Pg. 57, <https://www.regulations.gov/comment/NRC-2025-0379-0123>.

whether achievable target sets exist and whether active measures are credited. These changes make § 73.55 more technology-inclusive and align it with the framework already adopted in § 73.100 for Part 53 licensees. BTI has taken the same position in a separate docket: our comment⁶ on the pending Part 57 rule argues that Part 57's own security reference values should be drawn from § 73.100(b)(3) rather than the older § 50.34(a)(1)(ii)(D), because the former reflects the NRC's modernized, technology-inclusive security framework. Extending that same dose-based objective into § 73.55 is a consistent application of the same principle.

The final rule should preserve this flexibility while clarifying the technical basis required for each pathway under § 73.55. A determination that no achievable target sets exist should identify the relevant adversary assumptions, affected equipment and systems, credited mitigation, operator actions, timing, system dependencies, and the point at which consequences would become irreversible. The NRC should not prescribe a single analytical method, but the basis should be documented, internally consistent, and available for NRC review.

The final rule should also distinguish clearly between passive features and credited active measures, defining both terms in the regulatory text rather than leaving the distinction to guidance. Because § 73.55(f) already uses whether a licensee credits active measures as the determining fork between exemption from the section and full implementation of its security-plan requirements, that threshold should not rest on the non-exhaustive parenthetical example currently offered ("e.g., operator action, mitigative action, detection, assessment, armed response") without an accompanying definition of what counts as passive. Passive design characteristics may support a conclusion that no achievable target sets exist without requiring personnel or systems to respond after an attack begins. By contrast, operator actions, detection and assessment functions, powered systems, armed response, or engineered equipment that must perform during the event should be treated as active measures. Where active measures are credited, the licensee should identify proportionate reliability, testing, maintenance, training, and corrective-action controls.

The NRC should not impose a universal prior-approval requirement for target-set determinations. Instead, the final rule should identify the existing regulatory process applicable to each type of

⁶ The Breakthrough Institute, *Comment on Licensing Requirements for Microreactors and Other Reactors with Comparable Risk Profiles*, NRC-2025-0379, June 15, 2026, <https://www.regulations.gov/comment/NRC-2025-0379-0123>.

change and specify what documentation must be maintained. Changes that reduce the effectiveness of an approved security plan, alter a license condition, or rely on a broad exemption should remain subject to the applicable approval requirements. Other changes may appropriately be evaluated through existing licensee processes and verified through inspection.

The final framework should also require reevaluation when a material change affects the analysis. Appropriate triggers include plant modifications, changes in credited systems or operator actions, new operating experience, changes in deployment location, and material revisions to the design-basis threat. NRC staff stated during the July 13, 2026 meeting that the proposed framework was intended to remain usable if the design-basis threat later changes, but that intent should be reflected in the final rule or guidance rather than left solely in the meeting record.⁷ Because the validity of an achievable-target-set determination depends on the adversary capabilities assumed in the analysis, the final rule should require the licensee to reevaluate that determination whenever a change to § 73.1 or another related regulatory action materially alters those assumptions. The NRC should not treat disposition of the design-basis-threat review in a separate docket as sufficient unless the resulting change is expressly integrated into the implementation of § 73.55(f).

Credited Onsite and Offsite Armed Response

BTI supports removing the universal minimum of ten armed responders and allowing licensees to use onsite responders, offsite responders, or a combination of both. A fixed responder number is an imperfect proxy for whether a protective strategy can succeed. The objective is not to favor offsite response or reduce onsite staffing as an end in itself. The objective is to provide adequate protection through a facility-specific strategy that reflects the relevant risks and can demonstrably satisfy the applicable security performance objective. This position is consistent with BTI's 2024 support for flexible offsite response where facility design and delay provide sufficient time for external responders to perform the necessary function.⁸

The required response capability should therefore be determined as part of the complete protective strategy. A licensee may credit onsite, offsite, or a combination of responders where a

⁷ U.S. Nuclear Regulatory Commission, Public Meeting Summary, Modernizing Nuclear Security and Fitness-for-Duty Requirements (July 13, 2026).

⁸ Spencer Toohill, The Breakthrough Institute, *Comment on Alternative Physical Security Requirements for Advanced Reactors*, (Docket ID NRC-2017-0227), October 23, 2024, <https://www.regulations.gov/comment/NRC-2017-0227-0057>

site-specific analysis demonstrates that detection, assessment, notification, mobilization, travel, site access, deployment, and credited delay provide reasonable assurance that the response force can perform its assigned function before the applicable dose-reference values are exceeded. If that assurance cannot be demonstrated, the protective strategy must be revised to achieve the performance objective; the NRC should not predetermine onsite minimum staffing levels or treat offsite response as inherently supplemental to the credited strategy.

Supplemental law-enforcement support may improve defense-in-depth without being necessary to satisfy the performance objective. Credited offsite response, by contrast, is an essential part of the approved protective strategy. The final rule or guidance should distinguish credited offsite response from supplemental assistance and require a documented, site-specific basis for any credited capability. That basis should relate the external response capability to the complete protective-strategy timeline, including detection, assessment, notification, mobilization, travel, site access, deployment, and credited delay. These requirements should be proportionate to the facility's risk profile and to the importance of the offsite response within the overall strategy, rather than based on a uniform national response time or prescribed responder configuration.

Credited offsite capabilities should be subject to proportionate performance evaluation, compensatory measures when degraded, and reevaluation when material conditions change, including relocation of a transportable or redeployable reactor. The licensee should remain responsible for the adequacy of the overall protective strategy.

Performance-Based Training, Qualification, Engineered Systems, and Program Reviews

BTI supports replacing fixed training hours, prescribed examination formats, equipment lists, and calendar-based review intervals with requirements focused on demonstrated performance. The final rule and guidance should preserve alternative methods while identifying objective criteria that licensees and NRC inspectors can use to determine whether personnel, systems, and programs remain effective.

Practical demonstrations, simulations, observation, written or oral examinations, and other methods may each be appropriate depending on the assigned function. The NRC should therefore avoid requiring one qualification method for all facilities or security roles.

The final framework should nevertheless require each licensee to define the tasks and competencies associated with each assignment; the method used to evaluate satisfactory performance; the conditions requiring retraining or requalification; the basis for changing drill, exercise, or review frequencies; and the corrective actions required when performance is inadequate.

Licensees should be permitted to adjust training, exercise, and program-review intervals based on documented performance and risk significance. A licensee should not need to retain an interval that produces little useful information merely because it has historically been prescribed. At the same time, interval changes should be supported by relevant evidence rather than by the absence of known failures alone, particularly for low-frequency, high-consequence functions.

The same principle should apply to engineered systems credited in the protective strategy. Where a system replaces or materially reduces reliance on personnel, the licensee should define the performance, availability, testing, maintenance, and degradation criteria necessary to support that credit. The level of control should be proportionate to the system's role in satisfying the security performance objective.

Cybersecurity Event-Reporting Equivalence

BTI supports consolidating cyber-event reporting through existing safety and security reporting provisions, provided the revised framework preserves the substantive coverage of § 73.77.

The proposed approach would generally route cyber events through the reporting provision associated with the affected safety or security function. That structure may be more efficient than maintaining a separate reporting framework, but the current § 73.77 categories are broader than events involving an actual adverse impact. They also address events that could have caused an adverse impact, insider activity, reconnaissance or pre-operational planning, emergency-preparedness functions, and certain events reported to other governmental agencies.

The final rule should pay particular attention to events that do not result in an immediate adverse effect but may still provide important information about vulnerabilities, precursor activity, or attempted compromise. If no equivalent reporting pathway exists for a current category, that trigger should remain in § 73.77 or be added expressly to the appropriate receiving provision.

The NRC should also clarify how the revised framework applies to emergency-preparedness functions and mixed-function events. A cyberattack may affect safety, security, and emergency preparedness simultaneously, and licensees should not be required to infer the correct channel or deadline from multiple overlapping provisions.

The same approach should be coordinated across Parts 50, 53, and proposed Part 57. Comparable events should not be subject to materially different thresholds or reporting obligations solely because of the licensing pathway. This is especially important where multiple rulemakings may revise the same reporting provisions on overlapping schedules.

Recommendation

The NRC should finalize the proposed technology-inclusive, performance-based revisions to § 73.55, including the dose-based performance objective, graded target-set framework, flexible protective-response options, and performance-based training, qualification, equipment, and review requirements.

For the target-set framework, the final rule or guidance should specify the analytical basis and documentation required for each pathway, define passive features and credited active measures, identify the applicable regulatory process for subsequent changes, and require reevaluation when material changes—including revisions to the design-basis threat—affect the underlying analysis.

For protective response, the NRC should distinguish credited capability from supplemental assistance and require site-specific documentation, performance evaluation, degradation criteria, and compensatory measures proportionate to the role of onsite or offsite responders. The licensee should remain responsible for the effectiveness of the overall protective strategy.

For training, qualification, and engineered systems, the final framework should require objective competency, evaluation, retraining, corrective-action, interval-adjustment, reliability, and degradation criteria while preserving alternative methods that provide an equivalent or better demonstration of compliance.

The NRC should finalize the streamlined cybersecurity reporting framework only after confirming that each current § 73.77 reporting trigger has an equivalent regulatory destination. Any trigger without an equivalent pathway should be retained or incorporated expressly into the applicable reporting provision.

V. FACILITY SECURITY CLEARANCE AND SAFEGUARDING OF NATIONAL SECURITY INFORMATION (PART 95)

BTI supports aligning Part 95 with the National Industrial Security Program Operating Manual in 32 CFR part 117 and removing requirements that are duplicative or inconsistent. Maintaining separate NRC requirements for functions already governed by the NISPOM creates unnecessary administrative burden and may produce conflicting compliance expectations without improving the protection of classified information.

Part 95 should retain only those requirements and processes that are specific to NRC-cleared entities or necessary to address Restricted Data and other NRC responsibilities not fully covered by 32 CFR part 117. The final rule or guidance should clearly distinguish the requirements incorporated through the NISPOM from the NRC-specific provisions that remain applicable.

Recommendation

The NRC should finalize the proposed NISPOM alignment, remove duplicative Part 95 requirements, and clearly identify the provisions that remain unique to NRC-cleared entities.

VI. IMPLEMENTATION AND TRANSITION

BTI supports allowing existing licensees to retain compliant approved programs and voluntarily adopt the new security flexibilities when operationally appropriate. In July 13th, 2026 public meeting, the NRC staff stated that existing programs should remain compliant and that licensees should be able to adopt the new flexibilities later, while also acknowledging that the proposed

text may not fully reflect that intent⁹. The final rule should identify any provisions that apply automatically and distinguish them from options that require an affirmative election.

The NRC should also explain how a licensee elects a revised option and when the revised compliance basis becomes effective. The implementation framework should identify whether a change may proceed under § 50.54(p), requires a license amendment under § 50.90, requires prior approval under another provision, or may be implemented through licensee evaluation and documentation. A concise implementation table would reduce uncertainty and help ensure consistent treatment across NRC offices and regions.

Licensees should be permitted to adopt separable options individually where doing so does not create an internally inconsistent program. For example, a licensee may wish to revise responder staffing, training methods, or review intervals without simultaneously adopting every target-set or engineered-security provision. The final rule should identify which options are independently usable and which depend on adoption of a broader integrated framework.

During any transition, the existing approved program should remain controlling until the revised program becomes effective under the applicable regulatory process. Licensees may need time to revise physical-security plans, procedures, training, staffing, equipment, responder arrangements, and supporting analyses. The final rule should avoid creating a period in which neither the existing nor revised program clearly governs.

The NRC should also clarify how generally available new options interact with existing orders, exemptions, license conditions, and commitments. These site-specific instruments should not be silently displaced, but outdated requirements should not unnecessarily prevent use of the new framework. The NRC should identify a streamlined process for modifying instruments that no longer reflect the generally applicable security requirements.

The same implementation principles should apply to ISFSIs and facilities transitioning through decommissioning. The NRC should identify when a facility may adopt revised § 73.51 requirements, how that transition interacts with existing decommissioning orders or approvals, and which regulatory instrument controls until the transition is complete.

⁹ U.S. Nuclear Regulatory Commission, Public Meeting Summary, Modernizing Nuclear Security and Fitness-for-Duty Requirements (July 13, 2026).

Training and responder transitions also require clear treatment. Personnel qualified under an existing approved program should not automatically become unqualified when the final rule becomes effective. Likewise, a licensee moving from an onsite response model to one relying on credited offsite responders should not reduce onsite capability until the revised strategy, supporting arrangements, and necessary performance demonstrations are complete.

For transportable or redeployable microreactors, implementation should address movement between jurisdictions. A change in location may affect responder availability, travel time, communications, access, and legal authority. The licensee should confirm that the site-specific security basis remains valid before operation at the new location.

Finally, the NRC should distinguish among the rule's legal effective date, the deadline for any mandatory compliance changes, the date a licensee elects an optional provision, and the date the revised program becomes the controlling compliance basis.

Response to the Cumulative-Effects Questions

A 30-day effective date and 180-day compliance period may be sufficient for limited mandatory changes, but those dates should not prevent a licensee from electing optional flexibilities later. More complex changes involving target-set analyses, responder arrangements, training revisions, or site-specific regulatory instruments may require additional time and should proceed under the applicable approval or change process.

The principal unintended consequence would be ambiguity over which compliance basis applies during transition. Other potential consequences include inconsistent treatment of partial elections, conflicts with existing orders or license conditions, and premature staffing or training changes before the revised program is fully implemented. A consolidated implementation framework would address those risks without delaying the availability of the new options.

Recommendation

The NRC should accompany the final rule with a robust implementation directive that preserves existing compliant security programs, identifies the applicable regulatory process for adopting each optional provision, and provides an orderly transition to the revised framework. The implementation framework should also identify which provisions may be adopted

independently, clarify the interaction between the new rule and existing orders, exemptions, license conditions, and commitments, and establish a streamlined process for reconciling site-specific regulatory instruments with the modernized Part 73 requirements.

VII. TECHNICAL AND DRAFTING CORRECTIONS

There are technical and cross-reference definitions in the proposed rule that need clarification, as shown in the table:

Provision or Instruction	Technical Error	Recommendation
§ 26.113(c)	The proposed cross-reference to § 26.31(d)(3)(ii). Because the proposed rule deletes the original § 26.31(d)(3)(ii) and redesignates the subsequent paragraph, this cross-reference is now broken.	The NRC should either update this cross-reference to point to the HHS-certified laboratory testing requirements in § 26.31(d)(3)(i) or delete the obsolete phrase entirely.
§ 26.189(c)	The phrase “as long at” appears to be a typographical error.	Replace “as long at” with “as long as.”
§ 52.79 amendatory instruction	The instruction refers to a footnote following § 75.55, although the existing footnote appears to refer to § 73.55. <i>b. In footnote 8, add the phrase “or § 73.100” after the phrase “§ 75.55”.</i>	Use the correct § 73.55 reference.
§ 73.110(a)(1)	The paragraph refers to § 52.47(a)(2)(iv), while related target-set provisions rely on § 52.79(a)(1)(vi)(A) and (B).	Different Part 52 sections for the exact same dose reference values introduce unnecessary regulatory ambiguity. The NRC needs to confirm the intended provision.

The NRC should also perform a final conformity check for terminology used across Parts 50, 52, 53, and proposed Part 57, including the terms “target set,” “achievable target set,” “active measures,”

and “reasonable assurance.” Differences should be retained only where they reflect an intentional technical or licensing distinction.

Recommendation

BTI recommends that the NRC correct the discrete textual, cross-reference, and guidance issues in the table above before finalizing the rule.

VIII. CROSS-RULE COORDINATION AND EXECUTIVE ORDER 14300

The NRC is currently undertaking a large number of interrelated rulemakings on overlapping timelines. Many of these rulemakings rely on shared definitions, cross-references, reporting provisions, and technical assumptions and are intended to operate as an integrated regulatory framework rather than as isolated amendments.

When related rules are published and dispositioned asynchronously, gaps or inconsistencies may not be visible within the scope of any single comment period. Earlier comments may lack visibility into later revisions, while later rulemakings may rely on changes that were not incorporated—or not fully addressed—in earlier dockets. As a result, an issue may be partially addressed in one rulemaking without resolving the underlying regulatory interaction.

BTI supports the NRC’s decision to advance security modernization on an expedited basis under Executive Order 14300. The final rule should, however, include explicit coordination mechanisms where this rule and adjacent rulemakings depend on the same definitions, technical assumptions, or regulatory provisions.

The most important coordination issue is the separate NRC review of the design-basis threat in § 73.1. Target-set determinations, engineered delay, and credited armed-response strategies all rely on assumptions about adversary capabilities. NRC staff stated during the July 13, 2026 public meeting¹⁰ that the design-basis-threat review is a separate activity and that the proposed framework should remain usable if the threat is later revised. The final rule or guidance should therefore require reevaluation when a material change to the design-basis threat affects an approved or documented security analysis.

¹⁰ U.S. Nuclear Regulatory Commission, Public Meeting Summary, Modernizing Nuclear Security and Fitness-for-Duty Requirements (July 13, 2026).

The NRC should also coordinate amendments shared by this rule, Part 53, and the pending Part 57 framework. Sections such as §§ 73.77 and 73.110, as well as general Part 26 provisions, may be affected by more than one action. If separate final rules amend the same paragraph against different baselines, a later amendatory instruction could inadvertently overwrite or conflict with an earlier change.

Recommendation

BTI recommends that the NRC identify provisions amended or relied upon in related pending or recently finalized rulemakings; publish the intended integrated text where amendments overlap; harmonize shared definitions, reporting routes, and implementation milestones; require reevaluation when a material design-basis-threat or related technical change affects a security determination; coordinate effective and transition dates; and conduct a focused post-implementation review of cross-docket interactions.

Without these safeguards, otherwise beneficial reforms could produce inconsistent text, stale technical assumptions, or avoidable licensing and implementation rework. Explicit coordination would allow the NRC to maintain the pace of modernization while ensuring that the resulting regulatory framework operates as a coherent system.

IX. RESPONSES TO SPECIFIC REQUESTS FOR COMMENT

Question 1: The NRC seeks stakeholder input on whether to revise or remove the term 'vital areas' for power reactor facilities. Please explain the basis for your response.

BTI supports the NRC in replacing the legacy "vital area" prescriptive term with the risk-informed, consequence-based "target sets" physical security framework. The existing vital area concept was developed for the operating characteristics and plant layouts of the current fleet of large light-water reactors. As the NRC licenses advanced reactors with passive safety features, greater automation, and fundamentally different safety architectures, applying the same prescriptive approach may require licensees to protect equipment that does not perform a credited safety function or whose compromise could not result in unacceptable radiological consequences.

A consequence-based target set framework better aligns physical security requirements with the facility's actual risk profile. Rather than requiring licensees to designate and protect predefined categories of equipment, the NRC should continue to allow security programs to focus on those systems, structures, and components whose protection is necessary to prevent radiological sabotage. This approach preserves the NRC's security objectives while avoiding unnecessary physical security infrastructure for facilities and unnecessary regulatory burden while maintaining robust protection of public health and safety.

Most importantly, removal of the term should not require existing licensees to revise otherwise compliant approved security plans. The NRC should make necessary conforming amendments and should preserve the option for a licensee to use a vital-area construct as part of its facility-specific method for protecting target sets.

Question 2: The NRC seeks stakeholder input on the following:

- a. How would this change impact the security programs of current licensees?*
- b. Would changing the performance objective in § 73.55(b)(3) provide any benefit to future licensees given that § 73.100 already offers a flexible, technology-inclusive performance objective for new reactors?*

Response to Question 2(a). The revision could provide current licensees with additional flexibility, but it should not automatically require reanalysis or amendment of an existing NRC-approved security program. Existing licensees should be permitted to retain their approved programs unless they affirmatively elect to adopt the revised performance objective or make another change that triggers the applicable regulatory review process.

Response to Question 2(b). The revision would also benefit future Part 50 and Part 52 applicants notwithstanding the availability of § 73.100. Incorporating a comparable consequence-based pathway into § 73.55 would reduce unnecessary differences among licensing frameworks and allow applicants to choose a licensing pathway without losing access to technology-inclusive security treatment. Providing comparable flexibility under §§ 73.55 and 73.100 would also allow applicants to incorporate security-by-design without making the availability of graded security requirements depend on the selected licensing pathway.

Question 3: Are there additional changes the NRC should consider to streamline or simplify FFD requirements? For example, are there requirements in Part 26 that could be moved from regulation to guidance to reduce prescriptiveness while allowing licensees and applicants to propose alternate methodologies?

The NRC should review the remaining Part 26 requirements for assumptions tied to large, onsite light-water-reactor workforces. Requirements governing sequestration, work hours, remote assessments, personnel scope, and training frequency should be expressed as performance outcomes wherever practicable, with guidance identifying acceptable implementation methods. Alternative methodologies should be evaluated based on whether they provide equivalent assurance that personnel performing safety- or security-significant functions remain fit for duty.

- Address Fixed Work-Hour Limits and Sequestration (§§ 26.205 and 26.207(e))

Although the proposed rule provides useful administrative relief during sequestration events, its alternative limits—including 16 hours in a 24-hour period, 86 hours in 7 days, and no more than 14 consecutive 12-hour shifts—remain tied to traditional light-water-reactor staffing assumptions. The NRC should allow advanced reactors to propose performance-based fatigue controls and waiver structures that provide equivalent assurance based on their staffing models, credited human actions, and risk profiles.

- Resolve the NLCP Audit Gap Through Guidance (§§ 26.41(c)(2) and 26.168)

BTI supports eliminating the annual licensee audit requirement for HHS-certified laboratories. Because the proposed rule states that NLCP inspections cover the majority, rather than all, laboratory services relevant to Part 26, the NRC should identify any NRC-specific functions that fall outside the NLCP inspection scope and explain whether blind performance testing under § 26.168 or another existing oversight mechanism adequately addresses them. If no residual oversight gap exists, a separate licensee audit requirement is unnecessary.

Question 4: Should the proposed changes to prescriptive security and fitness-for-duty requirements that are based on the operating experience and performance history of the operating reactor fleet be applicable to all licensees and applicants, as currently proposed, or should the NRC develop criteria to limit the applicability of these proposed changes? If the NRC should develop criteria to limit the applicability of these proposed changes, what criteria should the NRC consider? Please provide a basis for your response.

The proposed changes should generally remain available to all licensees and applicants rather than being limited categorically to facilities with extensive operating history. Some advanced reactors and new applicants will not have long facility-specific performance records, but that alone should not exclude them from using technology-inclusive and performance-based requirements.

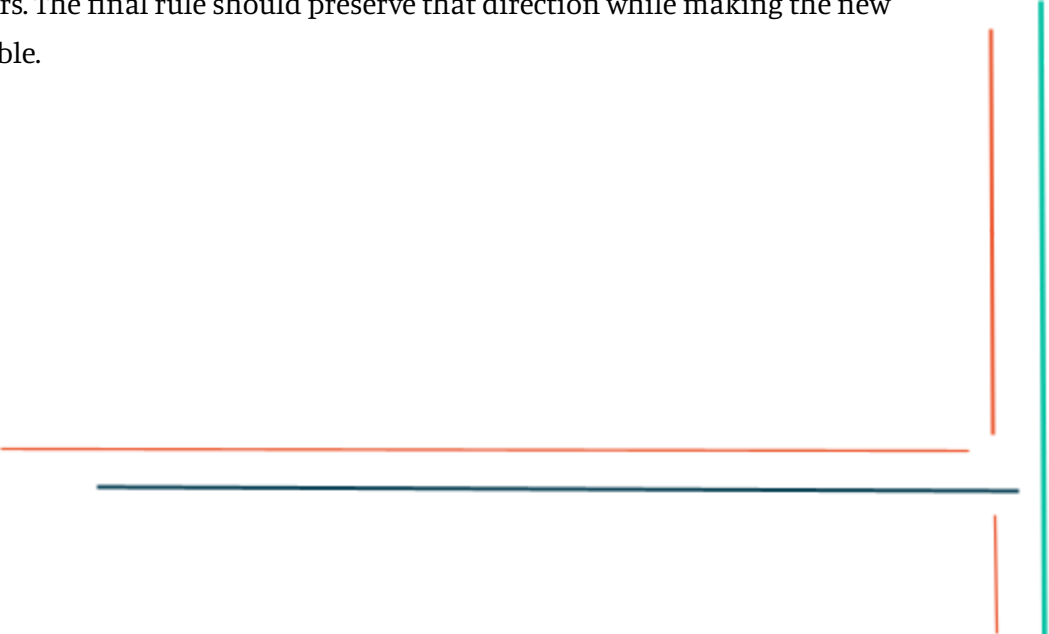
The NRC should distinguish requirements eliminated because operating experience shows that a prescriptive input is not generally necessary from flexibilities that depend on a licensee-specific record of satisfactory performance. The former should ordinarily be available to new licensees; the latter may appropriately be conditioned on initial demonstrations or other proportionate assurance measures.

Where additional assurance is needed, the NRC should rely on design-, function-, or performance-based criteria. These may include initial demonstrations, enhanced surveillance, shorter initial review intervals, or other proportionate measures. Such conditions would address uncertainty without denying new technologies access to the same regulatory flexibility.

The NRC should finalize the performance-based direction while requiring documented qualification criteria, retraining and corrective-action triggers, support for interval changes, and proportionate reliability controls for credited engineered systems. These measures would preserve flexibility while providing a clear and auditable basis for oversight.

X. CONCLUSION

BTI supports the NRC's proposed transition toward consequence-based, technology-inclusive, and performance-based security requirements. The proposal would better align regulatory obligations with facility-specific consequences, design features, engineered protections, and demonstrated performance, while reducing reliance on legacy prescriptions developed primarily for large light-water reactors. The final rule should preserve that direction while making the new flexibilities clear and durable.



BTI appreciates the opportunity to submit these comments and would welcome further engagement with the staff on the issues raised in this letter.

Sincerely,

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