

August 27, 2026

Chairman Nieh, and Commissioners Wright, Crowell, Marzano, and Weaver
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Comments of the Connecticut Department of Energy and Environmental Protection on NRC
Regulatory Modernization Efforts – Reforming and Modernizing the NRC’s Radiation
Protection Framework

Docket ID: NRC–2025–1140

Dear Chairman Nieh, and Commissioners Wright, Crowell, Marzano, and Weaver:

The Connecticut Department of Energy and Environmental Protection (DEEP) appreciates the opportunity to provide comments on the U.S. Nuclear Regulatory Commission’s (NRC’s) proposed revisions to 10 CFR Parts 19, 20, 34, 35, 40, 50, 53, 61, 71, and 72¹ as part of the NRC’s regulatory modernization efforts under Executive Order 14300.

Innovation in advanced nuclear technologies offers an important clean energy solution to meeting increasing energy demands. An exploration of increasing nuclear deployment must include a central commitment to ensuring safety, both to meet our shared mission of protecting public health and safety but also to ensure the public has the trust and reassurance needed to support this increased deployment. The State of Connecticut (hereinafter “Connecticut” or “State”) has taken deliberate steps to explore the role of advanced nuclear energy through a community-centered framework established under Connecticut’s Public Act 25-173. This approach enables municipalities to opt in to hosting advanced nuclear facilities and supports robust public engagement, technical evaluation, and informed local decision-making. Through this process, DEEP has found that transparency fosters public confidence, clarity, and trust in regulatory oversight. In the spirit of fostering transparency and engagement, DEEP recently held public informational meetings on exploring new and advanced nuclear capacity in Connecticut to facilitate stakeholder engagement and raise awareness about key issues in deployment of advanced nuclear technologies. Webinar recordings and other supporting materials can be found at this [link](#)². DEEP submits these comments consistent with the policy framework established in

¹ “Reforming and Modernizing the NRC’s Radiation Protection Framework,” (Docket: NRC-2025-1140), 91 FR 43456 (July 15, 2026).

² [https://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=59&Count=30&Expand=76.2&Seq=8](https://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=59&Count=30&Expand=76.2&Seq=8) (see, Public Act 25-173 - Informational Process to Explore New Nuclear Energy Capacity in Connecticut).

the Connecticut General Statutes (C.G.S.) regarding the development and regulation of nuclear energy and the use of radioactive materials

DEEP supports the development and utilization of atomic energy in a manner that protects public health and safety, promotes the common defense and security, and preserves the environment. This framework reflects a deliberate balance in Connecticut's state policy: the State is directed to adapt its laws and regulations to evolving conditions in ways that encourage the safe development of industries producing or utilizing atomic energy, while at the same time protecting the public interest. Connecticut remains committed to working with the NRC and to maintaining a regulatory program compatible with the Atomic Energy Act of 1954.

This statutory policy is implemented through a defined governance structure within the State's government. Pursuant to Section 16a-102 of the C. G. S., the Commissioner of DEEP serves as the State's lead official responsible for coordinating all atomic energy development and regulatory activities and ensuring consistency across state agencies. The Commissioner's statutory role encompasses coordination with the federal government, including the NRC, and reinforces DEEP's responsibility to ensure that regulatory programs are comprehensive, compatible, and effectively implemented.

As the 40th and most recent NRC Agreement State, Connecticut has direct regulatory responsibility for the safe use of radioactive materials within the State. DEEP is a partner with the NRC in the National Materials Program and is responsible for implementing compatible requirements, conducting inspections, and performing licensing and enforcement activities. Accordingly, Connecticut has a strong interest in ensuring that NRC rulemakings support effective, consistent, and implementable requirements nationwide.

DEEP respectfully submits its comments in Attachment A accompanying this letter, which underscore the State's significant concerns with the proposed changes to the Nation's foundational radiation protection standards—including long-established principles governing radiation dose limits, the As-Low-As-Reasonably-Achievable (ALARA) principle, and the underlying scientific and regulatory framework. The State's concerns are even more significant given the lack of the necessary and comprehensive technical evaluation of the scientific basis or potential impacts from those proposed changes. Unlike rulemakings focused on a single class of licensees or technology, this proposal would fundamentally revise the radiation protection framework that underpins virtually every NRC regulatory program. The proposed revisions to 10 CFR Part 20 and related regulations would affect the regulation of:

- commercial nuclear power reactors
- advanced reactors
- fuel cycle facilities
- radioactive waste management
- medical uses of radioactive materials
- industrial radiography
- manufacturing and research
- academic institutions

- transportation

decommissioning, and numerous other licensed activities. Because these changes establish the baseline standards upon which many NRC regulations and guidance documents rely, their implications extend well beyond individual regulatory requirements and have the potential to influence:

- future licensing decisions
- inspection programs
- enforcement practices
- emergency preparedness

environmental reviews, and public confidence across the entire spectrum of civilian radioactive material uses. For these reasons, reviewing the proposed changes requires:

- comprehensive technical evaluation of the scientific basis for the proposed changes
- assessment of regulatory compatibility and implementation impacts
- consideration of operational and enforcement consequences across multiple regulated industries

evaluation of potential unintended consequences, and development of well-supported recommendations on complex scientific, legal, and policy issues. As identified in DEEP's³ and others'⁴ requests for extension, the 45-day comment period is insufficient to fully evaluate and assess those matters.

At the same time, the volume and pace of concurrent rulemakings—more than twenty (20) underway, including multiple direct final rules—compounds the challenges for Agreement States and other stakeholders. This compressed timeline limits the ability of Connecticut to fully evaluate complex technical changes and the potential impacts, increasing the risk that implementation challenges may not be adequately addressed, and may render it pragmatically unfeasible to implement such technical changes within the timeframe prescribed.

It is essential that NRC rulemakings reflect a commitment to rigor, openness, and meaningful stakeholder engagement. Advancing significant regulatory changes without sufficient opportunity for review risks undermining public confidence—not only in existing programs, but also in the successful deployment of advanced nuclear technologies.

³ Comment on FR Doc # 2026-14208, NRC-2025-1140-0001, from Connecticut Department of Energy and Environmental Protection (ID NRC-2025-1140-0073)

⁴ Comment on FR Doc # 2026-14208, NRC-2025-1140-0001, from American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) (IN NRC:2025-1140-0016); Comment on FR Doc # 2026-14208, NRC-2025-1140-0001, from United Steelworkers International Union (ID NRC-2025-1140-0130); Comment on FR Doc # 2026-14208, NRC-2025-1140-0001, from Health Physics Society (ID NRC-2025-1140-0026); and, Comment on FR Doc # 2026-14208, NRC-2025-1140-0001, from Beyond Nuclear (ID NRC-2025-1140-0004).

Given these considerations, DEEP respectfully recommends that the NRC:

- Provide public comment periods that are sufficiently long to allow Agreement States and other stakeholders to thoroughly review, analyze, and assess the technical, legal, operational, and implementation impacts of proposed rulemakings, particularly where changes are complex, far-reaching, or issued concurrently with other major regulatory actions;
- Sequence and pace rulemakings to provide meaningful spacing between significant regulatory changes and avoid requiring Agreement States to review and implement multiple complex rulemakings simultaneously; and
- Limit the use of direct final rules to truly non-controversial or minor administrative changes, ensuring that substantive or technically complex revisions are subject to full notice-and-comment rulemaking.

In closing, and before turning to the specific comments in the Attachment A, Connecticut remains supportive of the NRC's efforts to modernize its regulatory framework and to fulfill its mission to protect public health and safety and advance the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment. Achieving these objectives while maintaining public trust and strong oversight will require a deliberate, transparent, and inclusive process that fully incorporates the experience and expertise of Agreement States.

Thank you for the opportunity to comment on this important matter.

Sincerely,



Emma Cimino
Acting Commissioner
Connecticut Department of Energy and Environmental Protection

ATTACHMENT A

Specific Requests for Comments

DEEP appreciates the NRC's request for specific comments in Section V of the Federal Register Notice (FRN) on the proposed "Reforming and Modernizing the NRC's Radiation Protection Framework."⁵ In response to the NRC's questions, DEEP offers the following perspectives:

DEEP Response to Question #1: The NRC is seeking input from the public on the proposed rule. The NRC is interested in comments and supporting rationale from the public regarding the implementation of proposed 10 CFR 20.1301(b), which would allow licensees and applicants to request higher dose limits for members of the public who access the controlled area, as defined in 10 CFR part 20. As explained in the proposed rule, the NRC would review these requests on a case-by-case basis and would provide individual approvals if the NRC determined that there was reasonable assurance of adequate protection of public health and safety.

(A) As it pertains to the proposed process of case-by-case reviews of requests for higher annual dose limits to members of the public who access the controlled area,

i. Would a performance-based method be an acceptable means of justifying such requests? For example, a performance-based method could rely on an integrated analysis of relevant factors (e.g., radiological hazards, occupancy, and access conditions) to demonstrate that members of the public are unlikely to receive doses exceeding the annual public dose limit in 10 CFR 20.1301(a).

DEEP is uncertain why the proposed regulatory change is necessary or what specific regulatory deficiency the NRC is seeking to address. The current requirements in 10 CFR § 20.1301, together with existing NRC guidance, already provide licensees with considerable flexibility to demonstrate compliance with public dose limits using performance-based methods that account for site-specific conditions.

For example, the NRC's NUREG-1556⁶ licensing guidance series describes multiple acceptable methods for demonstrating compliance with public dose requirements, including measurement-based approaches, dose calculations, environmental monitoring, occupancy factors, integrated assessments of radiological hazards, and other site-specific analyses. The guidance explicitly recognizes that licensees may demonstrate compliance through measurements or calculations, identify the maximally exposed individual, evaluate occupancy, account for external and internal

⁵ "Reforming and Modernizing the NRC's Radiation Protection Framework," (Docket: NRC-2025-1140), 91 FR 43456 (July 15, 2026).

⁶ "Consolidated Guidance About Materials Licenses." (NUREG-1556) available at <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/index>.

exposure pathways, and apply realistic site-specific assumptions where appropriate. These approaches already represent a fundamentally performance-based process that allows licensees to demonstrate compliance while providing flexibility to account for differences in facility design, operational practices, access controls, and public occupancy.

Accordingly, DEEP requests that the NRC more clearly identify the specific regulatory or implementation problem(s) that necessitates creation of a new approval process allowing higher annual dose limits for members of the public who access controlled areas. The Statement of Considerations explains that the proposed change is intended to provide additional flexibility for situations involving members of the public who temporarily access controlled areas, such as facility tours, individuals accompanying patients receiving medical treatment, visitors in waiting areas, or delivery personnel. However, these examples appear to describe circumstances that are already accommodated under the existing regulatory framework. Current NRC guidance, including the NUREG-1556 series, already permits licensees to use performance-based methods—including realistic occupancy factors, site-specific dose assessments, environmental monitoring, and integrated analyses of radiological hazards and access conditions—to demonstrate that the actual annual dose received by members of the public remains below the existing public dose limit of 100 mrem. Consequently, DEEP is uncertain how the proposed amendment provides additional regulatory flexibility for these types of temporary access situations beyond what is already available under current regulations and guidance.

If the NRC's intent is instead to authorize situations in which members of the public could receive annual doses exceeding 100 mrem, even after application of realistic occupancy assumptions and other accepted performance-based methodologies, then DEEP believes the proposed rule should state this more explicitly. Such situations represent a fundamentally different regulatory question than those involving temporary occupancy that can already be addressed under the existing public dose assessment framework. DEEP recommends that the NRC clearly distinguish between (1) situations involving temporary or intermittent access to controlled areas, such as tours, deliveries, visitors, and waiting rooms, where compliance with existing public dose limits can already be demonstrated through accepted performance-based methods, and (2) situations in which the NRC is proposing to approve higher annual public dose limits because members of the public are expected to receive actual doses exceeding the current limit. Separating these two circumstances would substantially improve the clarity of the proposed rule and allow stakeholders to more meaningfully evaluate the necessity, scope, and policy implications of the proposed regulatory change.

If the NRC determines that additional flexibility is warranted, DEEP agrees that any evaluation should remain performance-based and should consider the totality of facility-specific conditions rather than relying solely on prescriptive criteria. Such evaluations should include, at a minimum, consideration of the radiological source term, engineered and administrative controls, occupancy assumptions, access restrictions, exposure duration and frequency, facility operating conditions, environmental pathways, cumulative dose from all licensed activities, and the degree to which the licensee can reasonably demonstrate that members of the public are unlikely to receive doses approaching the applicable public dose limits. However, DEEP believes that many of these considerations are already incorporated into existing NRC guidance and licensing practice.

ii. Under an applicant driven, case-by-case analysis, how should NRC evaluate applicant requested justifications?

Because the proposed rule would establish a new case-by-case approval process, DEEP also recommends that the NRC develop detailed implementation guidance describing the information applicants should submit, the performance criteria the NRC will use to evaluate requests, the technical basis for approval or denial, and how the NRC intends to ensure consistency among licensing reviewers and Agreement States. Without clearly defined evaluation criteria, the proposed process could introduce greater subjectivity and regulatory uncertainty than currently exists under the existing public dose assessment framework. In light of the NRC's stated objective throughout this rulemaking of reducing subjectivity and increasing regulatory consistency, DEEP believes the NRC should clearly explain how the proposed approval process achieves those objectives more effectively than the existing regulatory framework and associated guidance.

DEEP is also concerned that authorizing increased public dose limits through case-by-case licensing decisions could result in members of the public being exposed to radiation doses above the long-established public dose limit without meaningful opportunity for public participation or awareness. Unlike a notice-and-comment rulemaking, individual licensing actions generally do not provide the broader public with an opportunity to review, comment on, or challenge the basis for approving higher public dose limits. In many cases, individuals who may ultimately be subject to the increased dose may not even be aware that such an authorization exists. Given that these decisions involve changes to the level of radiation exposure considered acceptable for members of the public, DEEP believes the NRC should carefully consider whether additional transparency, public notification, or public participation mechanisms are warranted before approving such requests. At a minimum, the NRC should establish clear, publicly available criteria governing these approvals and maintain a publicly accessible record of approved requests and their technical bases to promote transparency, consistency, and public confidence.

iii. What factors should the NRC consider in evaluating these requests (e.g., health risks, duration of entry, proximity to population centers, demographics, accessibility to the controlled area, national security, energy reliability, undue hardship, cost considerations), and how should these factors be prioritized?

If the NRC proceeds with establishing a process to approve higher annual dose limits for members of the public within controlled areas, DEEP believes that the primary consideration should remain whether there is reasonable assurance of adequate protection of public health and safety. Accordingly, the factors considered by the NRC should be limited to those that directly inform the technical evaluation of radiological risk and the likelihood and magnitude of public exposure.

As discussed in DEEP's response to Question 1(A)(i), many technical factors that appropriately influence public dose assessments—including occupancy, duration and frequency of access, engineered and administrative controls, access restrictions, facility operating conditions, source term, environmental pathways, and realistic exposure scenarios—are already incorporated into

existing NRC regulations and guidance and should continue to serve as the basis for evaluating public exposures.

DEEP opposes incorporating economic considerations, cost, or undue hardship as independent factors when determining whether members of the public should be permitted to receive doses exceeding the established annual public dose limit. The public dose limits in 10 CFR Part 20 represent fundamental health and safety standards. Whether members of the public should be exposed above those limits should be based on radiological protection considerations rather than the economic burden associated with complying with existing regulatory requirements.

DEEP also opposes the use of demographic characteristics such as age, sex, or ethnicity as a factor in determining whether higher public doses should be approved. The existing public dose limit in 10 CFR Part 20 applies uniformly to all members of the public and reflects a long-standing radiation protection principle that individuals should receive a consistent level of protection regardless of their age, socioeconomic status, occupation, or other demographic characteristics. Absent a consensus scientific recommendation from the National Council on Radiation Protection and Measurements (NCRP) or another broadly recognized scientific authority supporting a different approach, DEEP does not believe demographic characteristics should be used to establish differing levels of acceptable radiation exposure among members of the public. Incorporating demographic factors into these determinations could unintentionally create inequities in the application of radiation protection standards, lead to inconsistent regulatory decisions, and undermine public confidence that all individuals receive an equivalent level of health protection under the NRC's regulations.

DEEP also questions whether national security should be considered as a justification for approving higher public dose limits. Areas with legitimate national security or physical security concerns can generally be protected through existing security requirements and access controls that restrict entry to authorized individuals. Given that access can be appropriately controlled for security purposes, it is not necessary to increase allowable public dose limits to address those situations.

Likewise, DEEP does not believe energy reliability, by itself, should serve as a basis for jeopardizing public health by approving higher public dose limits. While reliable energy production is an important public policy objective, decisions regarding acceptable radiation exposure to members of the public should remain grounded in health and safety considerations rather than broader policy objectives unrelated to radiological protection.

If the NRC believes that individuals who routinely work in controlled areas, but whose assigned duties do not involve the direct use of radioactive materials, require access resulting in potential exposures above the public dose limit, DEEP believes the more appropriate regulatory approach is to consider those individuals occupationally exposed workers under an appropriate radiation protection program. Individuals who routinely work in proximity to licensed radioactive material, receive radiation safety training, and are monitored as part of a facility's radiation protection program are more appropriately managed under the occupational dose framework than through creation of a new category of higher public dose approvals.

Finally, DEEP recommends that the number of members of the public potentially affected by a requested approval be explicitly considered in the NRC's evaluation. As the number of individuals potentially receiving doses above the existing public dose limit increases, the basis for concluding that there is a reasonable assurance of adequate protection of public health becomes increasingly implausible. Accordingly, requests involving only infrequent, isolated exposures to a limited number of individuals present fundamentally different considerations than requests that could result in routine or recurring exposures to larger populations. The NRC should therefore explicitly consider both the number of affected individuals and the cumulative population impacts when evaluating any request for higher public dose limits.

iv. Similar to other protective measures (i.e., such as postings for high voltages at electrical substations), what measures would be appropriate to provide notice and protection to members of the public in such cases including any special subgroups such as transient workers, minors, pregnant or breast feeding women, etc.?

As discussed in DEEP's responses above, DEEP opposes the proposed creation of a process allowing members of the public to receive doses exceeding the existing annual public dose limit. The current regulatory framework, together with existing NRC guidance, already provides licensees with performance-based methods to demonstrate compliance with the public dose limits under a wide range of site-specific conditions. Accordingly, DEEP questions the need for this proposed regulatory change.

If the NRC nevertheless proceeds with this proposal, DEEP believes that any approval permitting members of the public to receive doses above the current annual public dose limit should include two fundamental elements: (1) measures that provide individuals with sufficient information and opportunity to make informed decisions regarding entry into the area, and (2) verification that the assumptions supporting the approved dose assessment remain valid during facility operations.

First, individuals entering such areas should receive clear notice that they are entering an area where radiation exposures may exceed those normally permitted for members of the public. While DEEP does not recommend designating these locations as "Radiation Areas" unless the applicable regulatory criteria are met, some form of standardized posting or universally recognizable pictorial symbol should be required to alert individuals that elevated radiation exposure may occur. Where appropriate, postings should identify any applicable occupancy or stay-time limitations and any restrictions necessary to support the approved dose assessment. Depending on the basis for the approval, this could include restrictions on access by children, pregnant or breastfeeding individuals, or other populations for whom the licensee has relied upon limited occupancy or other assumptions in demonstrating reasonable assurance of adequate protection. Alternatively, the NRC should consider requiring controlled access measures, such as escorted entry, administrative access controls, or other mechanisms that ensure only individuals meeting the conditions of the approval enter the affected area.

Second, because approvals under the proposed framework may rely heavily on calculated doses, occupancy assumptions, and other analytical models, DEEP recommends that licensees be required to periodically verify those assumptions through direct measurements. Environmental

dosimeters, area monitoring, radiation surveys, or other appropriate monitoring methods should be used, as applicable, to confirm that actual radiation levels and occupancy conditions remain consistent with those assumed in the approved analysis. Such verification would provide greater confidence that members of the public are not receiving doses exceeding those evaluated by the NRC and would provide both licensees and regulators with objective data to support continued compliance. Without periodic validation of the underlying assumptions, approvals based primarily on analytical calculations may become increasingly uncertain as facility operations, source configurations, or occupancy patterns change over time.

In addition, DEEP recommends that approvals issued under proposed 10 CFR § 20.1301(b) not be granted indefinitely without periodic review. Because these approvals are inherently dependent upon facility-specific assumptions and operating conditions, the NRC should require periodic reevaluation of the technical basis supporting the approval, including whenever significant changes occur that could affect public dose, such as modifications to facility operations, source inventories, shielding configurations, occupancy patterns, access controls, or adjacent land use. At a minimum, the NRC should consider requiring reevaluation at the time of license renewal or at another established interval to ensure that the original assumptions remain valid and that continued operation continues to provide reasonable assurance of adequate protection of public health and safety.

Finally, the NRC should develop implementation guidance establishing minimum expectations for postings, access controls, monitoring, recordkeeping, and periodic reassessment of approved conditions. Establishing nationally consistent expectations will be particularly important for Agreement States responsible for implementing compatible requirements and ensuring consistent application across the National Materials Program.

(B) Alternatively, or in addition to the previously discussed case-by-case review and approval process, should the NRC increase the annual public dose limit of 10 CFR 20.1301(a) within the controlled area?

DEEP opposes increasing the annual public dose limit established in 10 CFR § 20.1301(a) for members of the public who access controlled areas. The existing radiation protection framework already provides an appropriate mechanism for managing individuals whose routine activities require access to areas where radiation exposures may exceed the public dose limit. If an individual's assigned duties or routine activities require regular access to controlled areas such that annual doses may reasonably exceed the public dose limit, DEEP believes the more appropriate regulatory approach is to classify that individual as an occupationally exposed worker and apply the existing occupational radiation protection framework.

The occupational dose framework already incorporates a graded approach to radiation protection that is commensurate with potential risk. Depending on anticipated dose, individuals may be subject to varying levels of training, postings, access controls, surveys, monitoring, and dosimetry. For many workers whose anticipated occupational doses remain below applicable monitoring thresholds, the regulations already provide flexibility by not requiring individual dosimetry while still ensuring that appropriate radiation safety training and administrative

controls are in place. Accordingly, DEEP does not believe it is necessary to establish a third category of individuals subject to a separate set of dose limits and radiation protection requirements when an existing, well-established regulatory framework already addresses this circumstance.

i. What dose management measures would be appropriate in such cases?

As earlier noted, DEEP opposes increasing the annual public dose limit established in 10 CFR § 20.1301(a) for members of the public who access controlled areas. Nevertheless, if the NRC proceeds with increasing the allowable public dose within controlled areas, dose management measures should, at a minimum, be comparable to those currently applied to occupationally exposed workers receiving similar doses. Such measures should include radiation safety training appropriate to the anticipated exposure, postings and access controls, application of administrative dose constraints, maintenance of exposure records, periodic radiation surveys or environmental monitoring to verify dose assessments, and periodic reevaluation whenever facility conditions or occupancy assumptions change.

ii. Additionally, would it be sufficient for these dose management actions to be implemented through a licensee's radiation protection program, which is required by 10 CFR 20.1101, and verified through NRC inspection?

DEEP believes these measures should be implemented through a licensee's radiation protection program under 10 CFR § 20.1101 and verified through routine NRC or Agreement State inspections. However, implementation through the radiation protection program alone would not eliminate DEEP's concern regarding the creation of a separate category of public exposure. The existing occupational radiation protection framework already provides a comprehensive and well-understood regulatory structure for managing individuals with elevated radiation exposure. Expanding that existing framework, where appropriate, would provide greater regulatory clarity and consistency than establishing a new category of public dose limits applicable only within controlled areas.

iii. Finally, under such an option, what should the annual dose limit be for members of the public who access the controlled area under these circumstances?

DEEP opposes establishing a higher annual dose limit for members of the public within controlled areas. However, if the NRC ultimately adopts such an approach, DEEP recommends that the annual dose limit not exceed 500 mrem per year. This value is consistent with the threshold in 10 CFR § 20.1502 at which occupational workers are generally required to be monitored for external radiation exposure and therefore represents an established regulatory benchmark within the existing radiation protection framework. Establishing a higher limit would not be appropriate without corresponding radiation protection measures comparable to those already applicable to occupationally exposed workers. Regardless of the dose limit selected, DEEP recommends that the NRC clearly define the associated training, monitoring, posting, access control, recordkeeping, and inspection requirements to ensure consistent implementation across the National Materials Program.

DEEP Response to Question #2: What are the expected benefits (e.g., simplified design/construction, costs, operational efficiency) and drawbacks (e.g., additional dose management and controls, periodic monitoring of population, stronger access controls) of allowing higher annual dose limits to members of the public who access the controlled area and, in limited circumstances, outside the site boundary? What specific use cases are expected to leverage these flexibilities and what operational or design benefits are anticipated for these use cases if the flexibilities are adopted? Please provide quantitative information and description of use cases to the extent possible; however, qualitative assessments would be useful, as well.

DEEP does not anticipate that the proposed flexibility to allow higher annual dose limits for members of the public within controlled areas—or, in limited circumstances, outside the site boundary—would provide significant regulatory or operational benefits for most licensees.

As discussed in DEEP's response to Question 1, the NRC's existing regulatory framework and supporting guidance already provide performance-based methods for demonstrating compliance with the public dose limits in 10 CFR § 20.1301(a). Existing guidance, including the NUREG-1556 series, allows licensees to account for realistic occupancy factors, duration of occupancy, access restrictions, environmental monitoring, and other site-specific considerations when demonstrating that doses to members of the public remain below the annual public dose limit. Consequently, many of the examples cited by the NRC in the Statement of Considerations—such as facility tours, temporary visitors, delivery personnel, or individuals waiting to accompany patients—are already addressed and accommodated under the existing regulatory framework without requiring higher public dose limits or additional NRC approvals.

Similarly, individuals who routinely perform work activities within controlled areas, such as security personnel, maintenance workers, construction contractors, housekeeping staff, or other employees whose assigned duties require regular access to areas with elevated radiation levels, are already managed as occupationally exposed workers under the existing framework when appropriate. The NRC's current graded approach to occupational dose management already provides flexibility by allowing workers expected to receive less than 500 mrem annually to be managed without individual dosimetry while still receiving appropriate radiation safety training, postings, and other administrative controls. This approach provides an established regulatory framework that includes informed participation, worker awareness, and appropriate radiation protection measures without creating an additional category of individuals subject to intermediate public dose limits.

Accordingly, DEEP is uncertain what practical operational or design limitations currently exist that cannot already be addressed through the existing public dose assessment methodologies or the established occupational radiation protection framework. The proposed rule does not identify widespread examples where the current public dose limits have prevented beneficial licensed activities or imposed significant operational burdens. Absent such evidence, DEEP does not believe the anticipated benefits of the proposed flexibility have been adequately demonstrated.

Conversely, DEEP believes the proposal presents several potential drawbacks. Most significantly, allowing members of the public to receive doses exceeding the long-established public dose limit may adversely affect public confidence in the Nation's radiation protection framework. The current distinction between members of the public and occupationally exposed workers is well established and readily understood. Introducing intermediate categories of public exposure could create confusion regarding acceptable levels of radiation exposure and complicate public communications regarding radiation risk.

DEEP is also concerned that the proposal would result in individuals receiving higher radiation doses without the level of knowledge, training, or informed decision-making traditionally associated with occupational radiation exposure. Although the NRC proposes various notification and administrative controls, these measures are not equivalent to the comprehensive radiation protection training and oversight provided to occupational workers. Individuals who do not routinely work with radiation would be less aware of dose management practices, radiological hazards, and methods for minimizing unnecessary exposure.

Overall, DEEP believes the existing regulatory framework already provides sufficient flexibility to address the vast majority of practical situations identified by the NRC while maintaining a clear distinction between members of the public and occupationally exposed workers. Consequently, DEEP does not believe the proposed increase in allowable public dose limits is necessary to achieve the operational efficiencies described in the proposed rule and believes the potential impacts on regulatory clarity, public confidence, and informed participation considerably outweighs the limited benefits that have been identified.

If the NRC nevertheless adopts the proposed flexibility, DEEP believes it will be incumbent upon the NRC to develop comprehensive implementation guidance to ensure consistent application of the new provisions by NRC staff, Agreement States, and licensees. In particular, the guidance should establish clear evaluation criteria for case-by-case requests, identify the factors that should be considered under various exposure scenarios, and define reasonable upper bounds on acceptable public doses under those scenarios. Without such guidance, implementation of the proposed case-by-case approval process is likely to result in inconsistent regulatory decisions, increased subjectivity, and reduced regulatory predictability—the very concerns the NRC identifies as a principal basis for this rulemaking.

DEEP Response to Question #3: The NRC requests comments and supporting rationale on proposed 10 CFR 20.1301(d), which would allow licensees and applicants to request, on a case-by-case basis, higher public dose limits than those in 10 CFR 20.1301(a) when there is reasonable assurance of adequate protection of public health and safety.

(A) What factors should the NRC consider when evaluating these requests (e.g., dose control measures, health risks, proximity to population centers, demographics, land ownership, national security, energy reliability, cost considerations), and how should these factors be prioritized?

DEEP opposes establishing a process to approve public dose limits exceeding those in 10 CFR § 20.1301(a), whether through a generally applicable regulation or on a case-by-case basis. As

discussed in DEEP's response to Question 1 above, the existing regulatory framework and associated NRC guidance already provide licensees with substantial flexibility to account for site-specific conditions through performance-based methods, including realistic occupancy factors, access controls, engineering controls, environmental monitoring, and dose assessments. DEEP therefore remains uncertain what regulatory deficiency necessitates creation of a new process for approving higher public dose limits.

If the NRC nevertheless proceeds with this proposal, DEEP believes that the NRC's evaluation should remain focused primarily on whether there is reasonable assurance of adequate protection of public health and safety. Accordingly, the factors considered should be limited principally to technical and radiological considerations, including the effectiveness of dose control measures, engineered and administrative controls, realistic occupancy and exposure assumptions, environmental pathways, source characteristics, monitoring programs, and the ability to verify compliance through measurement and inspection.

DEEP opposes using economic considerations, cost, energy reliability, or similar societal policy objectives as independent factors in determining whether members of the public should receive doses above the established public dose limits. Those considerations may appropriately inform broader licensing or public policy decisions, but they should not serve as the basis for modifying fundamental radiation protection standards intended to protect individual members of the public. Likewise, DEEP opposes the use of demographic characteristics in evaluating such requests. As discussed previously, absent a consensus scientific recommendation from the NCRP or another broadly recognized scientific authority supporting a different approach, radiation protection standards should continue to provide an equivalent level of protection to all members of the public regardless of age, socioeconomic status, or other demographic characteristics.

(B) Are there scientific considerations the NRC should take into account when reviewing requests for increased dose limits on a case-by-case basis? Quantitative or qualitative information is useful.

DEEP believes that any request to exceed the existing public dose limits should be supported by a rigorous, scientifically defensible demonstration that there remains reasonable assurance of adequate protection of public health and safety. Such evaluations should consider the total effective dose equivalent from *all* licensed activities, realistic occupancy assumptions, cumulative exposure pathways, uncertainties associated with dose calculations, validation of analytical models through direct measurements where appropriate, and the potential impacts on individuals likely to receive the highest doses.

More fundamentally, DEEP believes that any proposal to permit routine public doses above the long-established public dose limit should be supported by a broader scientific consensus demonstrating that such a change remains consistent with accepted principles of radiation protection. While the proposed rule references one meta-analysis from Idaho National Laboratory, the proposed rule does not identify a consensus recommendation from the NCRP, International Council on Radiation Protection (ICRP), or any other broadly recognized scientific authority supporting routine public exposures above the existing regulatory limit. In the absence of such consensus, DEEP believes the burden should remain on the NRC to demonstrate within

the rulemaking record why existing public dose limits no longer provide the appropriate regulatory benchmark.

(C) Based on practical use cases and consistent with the NRC's intent for the flexibility in 10 CFR 20.1301(d), as described in the preamble, the NRC seeks input on the advantages and disadvantages of public dose limit flexibility allowed through 10 CFR 20.1301(d) and potential qualitative or quantitative limits on flexibility in guidance or regulatory text that the NRC should consider. Are there any practical use cases that would be challenged by a limitation on the flexibility allowed in 10 CFR 20.1301(d)?

Based on the examples discussed in the Statement of Considerations, DEEP believes that many of the practical situations cited by the NRC—including facility tours, temporary visitors, delivery personnel, and individuals accompanying patients—are already appropriately addressed under the existing regulatory framework using performance-based dose assessments that incorporate realistic occupancy assumptions and other site-specific factors. Consequently, DEEP does not believe these examples, by themselves, demonstrate a need for a new process allowing higher public dose limits.

If the NRC identifies practical situations in which members of the public would receive doses exceeding the existing annual public dose limit even after application of realistic occupancy assumptions and accepted performance-based methodologies, DEEP believes those situations should be clearly distinguished from temporary occupancy scenarios that are already addressed and accommodated for under current regulations and guidance. The proposed rule should clearly explain why existing regulatory mechanisms are insufficient and why a case-by-case approval process is the most appropriate solution.

If the NRC nevertheless adopts the proposed flexibility, DEEP believes it should be limited to exceptional circumstances where public access can be positively controlled through land ownership, physical barriers, or administrative access controls; individuals entering the area receive clear notice of the potential radiation exposure and have a meaningful opportunity to avoid that exposure; and the licensee can demonstrate through monitoring and verification that actual public doses remain consistent with the assumptions supporting the NRC's approval. DEEP opposes creating a mechanism that would allow members of the public to unknowingly or involuntarily receive doses above the established public dose limits or that would routinely authorize higher public exposures as a matter of operational convenience.

As discussed in DEEP's response to Question 1(A)(ii), DEEP is also concerned that authorizing higher public dose limits through case-by-case licensing decisions raises important issues regarding transparency, public awareness, and opportunities for public participation. If the NRC adopts this approach, DEEP recommends that the NRC establish clear, publicly available approval criteria and maintain a publicly accessible record of approved requests and their technical bases to promote transparency, regulatory consistency, and public confidence.

DEEP Response to Question #4: The NRC proposes to introduce the concept of the caregiver in the patient visit and release-related regulations in parts 20 and 35, respectively. This will enable people who are essential to the care and wellbeing of patients

receiving radiopharmaceutical treatments to willingly receive higher doses than members of the general public, if needed. As part of this regulatory change, while the NRC is maintaining the dose limit to members of the public from patient release at 500 mrem, the NRC proposes to revise the basis for calculating doses to members of the public from per-administration to per regimen. What are the advantages and disadvantages of using a per-regimen basis for patient release determinations? Would this approach create any barriers to treatment access? Alternatively, should the NRC retain a per administration basis for members of the public but apply a per-regimen basis for caregivers? Please provide quantitative information to the extent possible; however, qualitative assessments would be useful, as well.

DEEP supports the NRC's proposed revisions to 10 CFR § 20.1301(c) and 10 CFR Part 35 that recognize the important role caregivers and certain visitors play in the care and well-being of patients receiving radiopharmaceutical therapies. The proposal appropriately acknowledges that patient care extends beyond physical treatment and that the presence of family members and caregivers can be critical to a patient's emotional well-being, recovery, and overall quality of care. DEEP also agrees that allowing individuals who voluntarily choose to serve as caregivers to receive doses above the general public dose limit, when appropriate, is consistent with longstanding national and international radiation protection practices.

DEEP supports the proposed caregiver dose limit of 2 rem. This limit remains well below levels associated with deterministic health effects and appropriately recognizes that caregivers knowingly and voluntarily accept some additional radiation exposure to support the care of a loved one. The proposed limit represents a reasonable balance between radiation protection principles and the broader health and welfare needs of patients and their families.

With respect to the proposed change from a per-administration basis to a per-regimen basis for patient release determinations, DEEP believes additional clarification is needed regarding how a treatment regimen should be defined and applied in practice. The appropriateness of a per-regimen approach depends largely on the timing of individual administrations relative to the radioactive decay characteristics of the radionuclide involved. For example, multiple administrations occurring over a relatively short period—such as several treatments administered over a few weeks—may appropriately be evaluated collectively as a single treatment regimen because cumulative caregiver exposure could be significant. Conversely, treatments separated by many months, particularly where prior administrations have completely or substantially decayed before subsequent treatments occur, appear more appropriately evaluated on a per-administration basis. DEEP therefore recommends that the NRC provide guidance establishing objective criteria for determining when multiple administrations constitute a single treatment regimen. Such criteria should consider, at a minimum, the physical and effective half-life of the radionuclide, the interval between administrations, expected cumulative caregiver dose, and the overall treatment protocol.

DEEP recognizes that evaluating releases on a per-regimen basis may provide a more realistic estimate of the total radiation dose received by caregivers over the course of treatment and may better account for cumulative exposure than evaluating each administration independently. At the same time, a per-regimen approach could have unintended consequences by limiting flexibility

following initial treatments if cumulative projected doses approach the applicable release criteria earlier in the treatment course. Clear implementation guidance will therefore be essential to ensure consistent application across different radionuclides and treatment protocols while avoiding unnecessary barriers to patient care.

DEEP also believes the proposed caregiver provisions require additional implementation guidance. In particular, the proposed rule does not clearly address situations in which a patient initially requires hospitalization because release criteria are not met but is subsequently released to outpatient care later in the treatment course. Under the proposal, caregivers for hospitalized patients could receive up to 2 rem, while caregivers of released patients remain subject to the existing 500 mrem public dose limit associated with patient release. The proposed rule does not explain how these limits should be applied when a caregiver supports the same patient during both inpatient and outpatient phases of treatment. For example, it is unclear whether the applicable dose limit would remain 2 rem for the entire course of care, whether the outpatient limit would apply following release, or whether cumulative doses received in both settings should be combined.

DEEP recommends that the NRC establish a single cumulative caregiver dose limit of 2 rem that applies to the entire duration of care, including both inpatient and outpatient phases of the patient's treatment. This approach would provide a clear and consistent regulatory framework, eliminate uncertainty regarding how doses received before and after patient release should be accounted for, and better reflect the total voluntary radiation exposure accepted by the caregiver over the course of treatment. Under this approach, any radiation dose received while caring for the patient during hospitalization would count toward the same cumulative 2 rem limit that continues to apply following the patient's release. DEEP believes this approach is simpler to administer, avoids arbitrary distinctions based solely on the timing of patient release, and more accurately reflects the cumulative nature of radiation dose.

Regardless of the approach ultimately adopted, the NRC should clearly address these transition scenarios in the final rule or associated implementation guidance so that licensees, caregivers, and regulators have a common understanding of how caregiver dose limits are to be applied and documented throughout the full course of patient care.

Finally, DEEP believes additional guidance is needed regarding the dose management actions applicable to caregivers receiving doses approaching the proposed 2 rem limit. A caregiver receiving up to 2 rem may receive doses exceeding the monitoring thresholds applicable to many occupationally exposed workers under 10 CFR Part 20. Accordingly, the NRC should clearly address expectations regarding informed consent, radiation safety instructions, training appropriate to the anticipated exposure, dose monitoring or dosimetry, recordkeeping, and documentation of voluntary acceptance of the anticipated radiation dose. Establishing these expectations will help ensure that caregivers are adequately informed, that doses remain consistent with those evaluated by the licensee, and that implementation is consistent across NRC and Agreement State programs.

Overall, DEEP supports the proposed caregiver provisions as an appropriate patient-centered enhancement to the regulations but recommends that the NRC provide additional implementation

guidance addressing treatment regimen definitions, inpatient-to-outpatient transitions, caregiver dose accounting, informed consent, training, and dosimetry before finalizing the rule.

DEEP Response to Question #5: The NRC proposes to increase its radionuclide emissions standards from the current regulatory constraint in 10 CFR 20.1101(d) of 10 mrem per year to 25 mrem per year; this change would also be extended to the criteria in 10 CFR part 50, Appendix I. If a licensee releases effluents greater than or equal to the 25 mrem per year constraint, that licensee would be required to submit relevant reports to the NRC on an annual basis until levels are returned to below the 25 mrem per year constraint. Additionally, such a licensee would be required to evaluate and consider implementing cost justified corrective actions to restore effluent levels to below the 25 mrem per year constraint. The NRC is seeking input from the public on the following related to the proposed changes to effluent constraints and reporting requirements: Are there alternative approaches the NRC should consider, such as increasing the constraint while retaining existing reporting practices? What are the potential advantages or disadvantages of these alternative approaches?

DEEP believes that the proposed increase in the radionuclide air emissions constraint from 10 mrem/year to 25 mrem/year should be considered separately from the proposed revisions to reporting requirements. While the NRC has presented these changes together, the technical basis for modifying the reporting criterion is distinct from the question of whether routine public reporting of effluent information should continue.

DEEP has significant concerns with the proposed reduction in reporting associated with this change. Annual radiological effluent reports serve an important public transparency function by documenting that radioactive effluent releases remain well below applicable regulatory limits and do not adversely affect public health or the environment. DEEP has frequently relied upon these publicly available reports when responding to questions from elected officials, local communities, environmental organizations, and other stakeholders regarding the environmental performance of licensed facilities. The routine availability of this information has helped demonstrate that nuclear facilities are operating safely and within established regulatory limits, thereby supporting informed public discussion and confidence in regulatory oversight.

Under the proposed rule, licensees would continue to perform the same monitoring, calculations, and evaluations needed to demonstrate compliance with applicable effluent limits. Consequently, eliminating routine submission of these reports appears to provide little meaningful burden reduction for licensees beyond the administrative act of transmitting information to the NRC. Likewise, NRC staff would still be expected to review the same information during inspections. As a result, the proposed change appears to shift when the information is reviewed rather than substantially reducing either licensee or NRC workload. The principal effect of the proposal would therefore be to reduce the amount of information that is routinely available to the public.

As states and the Federal government work to expand deployment of advanced nuclear technologies, maintaining public confidence will remain essential to successful licensing and operation of both existing and future facilities. Transparent access to environmental monitoring and effluent information provides objective evidence that facilities continue to operate safely and

that releases remain well below levels of public health concern. DEEP believes reducing the routine public availability of this information is inconsistent with broader efforts to build and maintain public confidence in nuclear technology.

Accordingly, if the NRC determines that increasing the effluent constraint from 10 mrem/year to 25 mrem/year is appropriate DEEP recommends retaining the existing annual reporting requirements. Continued submission of annual effluent reports would preserve transparency while imposing minimal additional burden because the underlying monitoring, calculations, and documentation would continue to be required regardless of whether the reports are submitted to the NRC.

Alternatively, if the NRC elects to eliminate routine submission of these reports, DEEP recommends that licensees be required to make the reports publicly available, such as by posting them on a publicly accessible website or otherwise making them readily available upon request. Making reports available only during NRC inspections or upon request from regulators unnecessarily limits public access to information that has historically demonstrated the effectiveness of the NRC's radiation protection framework.

Finally, DEEP recommends that the NRC carefully evaluate whether increasing the reporting threshold to 25 mrem/year could reduce opportunities to identify adverse trends before they approach regulatory limits. The existing 10 mrem/year reporting criterion has provided an effective mechanism for early regulatory awareness while documenting that releases remain below applicable public dose limits. If the NRC concludes that a higher reporting criterion is warranted, DEEP believes the Commission should clearly explain the technical basis for selecting 25 mrem/year and demonstrate why that change continues to provide an appropriate level of regulatory oversight while maintaining public confidence.

DEEP encourages the NRC to adopt a general principle that information demonstrating compliance with public radiation protection standards should be publicly available unless there is a compelling security or privacy reason to withhold it.

DEEP Response to Question #6: If the public dose limit in 10 CFR 20.1301(a) were increased, what level would be appropriate and why? What would be the advantages and disadvantages of such a change? Please provide the technical basis for your response, including quantitative or qualitative information supporting that basis.

DEEP opposes increasing the annual public dose limit established in 10 CFR § 20.1301(a). Accordingly, DEEP does not recommend an alternative public dose limit.

The existing public dose limit has served as a foundational element of the NRC's radiation protection framework for decades and is reflected throughout the National Materials Program, Agreement State regulations, NRC guidance, license conditions, and radiation protection programs across a broad range of industries. Changes to such a fundamental radiation protection standard should be based upon a clear scientific consensus demonstrating that the existing limit no longer represents an appropriate level of protection for members of the public.

As discussed in DEEP's comments regarding the proposed removal of the ALARA requirement, DEEP believes any fundamental revision to long-established radiation protection standards should first be evaluated by the NCRP, the congressionally chartered organization established to provide independent scientific guidance on radiation protection. NCRP periodically reviews the evolving scientific literature through a comprehensive process involving multidisciplinary technical experts and develops consensus recommendations based on the totality of available scientific evidence. DEEP believes this congressionally established process provides the appropriate scientific foundation for changes of this magnitude.

The NRC has not provided evidence demonstrating that the existing annual public dose limit has imposed a significant regulatory burden on NRC licensees, Agreement State licensees, or reactor licensees that would warrant increasing this long-established standard. Based on DEEP's regulatory experience, the current public dose limit has not presented a significant implementation challenge, nor is DEEP aware of circumstances in which licensees have routinely approached the existing limit or sought regulatory relief because compliance with the limit was impracticable. Likewise, the proposed rule states but does not present evidence demonstrating that the current public dose limit has resulted in widespread operational constraints, inconsistent regulatory outcomes, or unnecessary burdens across the regulated community. Before modifying one of the Nation's foundational radiation protection standards, DEEP believes the NRC should clearly demonstrate that a genuine regulatory need exists and that the benefits of such a change outweigh the value of maintaining a well-established and broadly accepted public health standard. Given the absence of both a documented regulatory need and a scientifically based consensus supporting the change, DEEP believes an increase in the public dose limit is unfounded.

The primary health concern associated with low-dose radiation exposure is the potential for stochastic effects, particularly cancer, which may not become apparent for years or even decades following exposure. Consequently, the absence of immediately observable adverse health effects should not be interpreted as evidence that increasing public dose limits presents no additional risk. This inherent latency reinforces the importance of relying upon a thorough, consensus-based scientific review before modifying long-established public dose standards.

DEEP further notes that Agreement States cannot reasonably be expected to independently conduct comprehensive reviews of the extensive scientific literature supporting or opposing changes to fundamental radiation protection standards during a 45-day public comment period. Such an undertaking would require substantial scientific literature reviews, independent technical evaluation by subject matter experts, and potentially significant contracted scientific support. Rather than expecting individual states and stakeholders to duplicate this effort, DEEP believes the NRC should rely upon the established expertise and consensus-building process of the NCRP before adopting changes to foundational public dose limits.

Until such a comprehensive scientific review has been completed and a consensus recommendation has been developed, DEEP believes the existing annual public dose limit remains the appropriate regulatory standard. Maintaining the current limit provides regulatory stability, promotes consistency across the National Materials Program, and supports continued

public confidence that changes to the Nation's radiation protection framework are based on sound science rather than policy preferences alone.

Cumulative Effects of Regulation (CER)

DEEP provides the following responses to the specific request for comments in Section XI. Cumulative Effects of Regulations of the FRN:

DEEP Response to CER Question #1: The NRC is proposing an effective date that will be 30 days after the date of publication of a final rule. Does this provide sufficient time to implement the proposed requirements? Please provide a rationale for your response.

DEEP recognizes that, as an NRC Agreement State that incorporates many NRC requirements by reference, implementation of compatible regulations can often occur more efficiently than in states that must undertake extensive independent rulemaking processes. Accordingly, DEEP does not view the regulatory adoption process itself as the primary implementation challenge associated with this rulemaking.

However, implementation considerations extend beyond the Agreement State radioactive materials program. For the reasons discussed in detail, DEEP does not believe a 30-day implementation period is sufficient for a rulemaking of this magnitude. In Connecticut, DEEP also has statutory responsibilities to coordinate radiation protection requirements across all sources of radiation, including both NRC-regulated radioactive materials and state-regulated machine-produced radiation (e.g., diagnostic x-ray, computed tomography, fluoroscopy, accelerators, and other radiation-producing equipment). Pursuant to C.G.S. § 16a-102, DEEP is responsible for coordinating and reviewing state regulations governing sources of radiation to ensure consistency, while preventing unnecessary duplication, inconsistencies, or gaps in regulatory requirements. Similarly, C.G.S. § 16a-100 establishes the State's policy of adapting its radiation laws and regulations as necessary while promoting uniformity with the NRC and other states. Accordingly, if the NRC adopts significant changes to foundational radiation protection principles—including revisions to public dose limits, elimination of ALARA as a regulatory requirement, or adoption of a new graded approach to dose management—Connecticut will need to implement corresponding revisions to its regulations governing machine-produced radiation to maintain a consistent, coordinated statewide radiation protection framework. This broader regulatory review will require additional technical evaluation, stakeholder engagement, and rulemaking activities beyond those associated with implementing compatible NRC requirements alone.

DEEP's primary implementation concerns relate to the supporting infrastructure, guidance, and administrative processes necessary to ensure consistent implementation across the National Materials Program. While the regulatory requirements themselves may become effective within 30 days, successful implementation will depend upon the timely development of licensing guidance, inspection procedures, enforcement guidance, training materials, administrative processes, and other supporting resources necessary to ensure consistent oversight by both the NRC and Agreement States.

This need is particularly significant because the proposed rule would fundamentally revise long-established radiation protection concepts that are embedded throughout NRC regulations, guidance documents, NUREGs, inspection procedures, licensing review guidance, standard review plans, and training materials. For example, although the NRC indicates that licensees may continue to voluntarily apply ALARA as a best practice following removal of the regulatory requirement, ALARA is referenced extensively throughout NRC guidance and forms an integral part of many existing licensing and inspection programs. Without clear implementation direction, licensees and regulators may reach different conclusions regarding how existing guidance should be interpreted following the rule's effective date.

Accordingly, if the NRC proceeds with the proposed changes, DEEP recommends that the NRC issue overarching implementation guidance addressing the continued use of existing guidance documents that reference ALARA until those documents can be systematically revised. Such guidance should clearly explain when existing references to ALARA should be interpreted as voluntary best practices, when they remain relevant to demonstrating compliance with other regulatory requirements, and when new concepts introduced by the final rule should instead be applied. Without this type of transition guidance, the National Materials Program will experience inconsistent implementation among NRC regions, Agreement States, and licensees during what is likely be a multi-year effort to update the extensive body of supporting guidance.

DEEP is also concerned that many of the new concepts introduced by the proposed rule—including the “graded approach to dose management”—are not currently described or implemented within existing NRC guidance. As a result, licensees, NRC staff, Agreement States, and members of the public will require a common understanding of how these concepts are to be applied in licensing, inspection, compliance, and enforcement activities. Development of this supporting guidance should occur sufficiently in advance of implementation to ensure consistent interpretation nationwide.

More broadly, DEEP believes that successful implementation of a rulemaking of this significance requires not only revised regulatory text but also regulatory clarity and certainty. The NRC has identified inconsistent interpretation and application of existing requirements as one of the principal reasons for proposing these revisions. DEEP is concerned that implementing the rule before the necessary supporting guidance, training, and inspection procedures are available could inadvertently create the very inconsistency the rule is intended to address. Consistent with the NRC’s Principles of Good Regulation⁷—particularly Clarity and Reliability—licensees and regulators alike should have clear, well-defined expectations regarding how the revised requirements are to be implemented and enforced before they become effective.

Accordingly, DEEP does not believe a 30-day implementation period is sufficient for a rulemaking of this magnitude. While the regulatory text itself may be finalized within that timeframe, successful implementation will require substantial revisions to NRC guidance documents, NUREGs, inspection procedures, licensing review guidance, enforcement policies, training materials, and other supporting resources before licensees and regulators can reasonably

⁷ <https://www.nrc.gov/about-nrc/values>.

be expected to comply with the new framework. In addition, Agreement States will require sufficient time to evaluate compatibility implications, complete any necessary state regulatory actions, revise state guidance and procedures, update training programs, and, where applicable, make corresponding changes to regulations governing machine-produced radiation to maintain a coordinated and consistent statewide radiation protection program.

Accordingly, DEEP recommends that the NRC establish an implementation period of approximately two years following publication of the final rule before the new requirements become effective. This implementation period would provide the NRC adequate time to systematically update its extensive body of guidance, develop and deliver training for NRC and Agreement State staff, issue transition guidance addressing existing references to ALARA and other superseded concepts, and ensure that licensees have a clear understanding of the new regulatory expectations before compliance is required. Such an approach would better support the NRC's Principles of Good Regulation—particularly Clarity, Reliability, and Efficiency—by promoting consistent implementation across the National Materials Program and avoiding unnecessary confusion during the transition to a fundamentally revised radiation protection framework.

DEEP Response to CER Question #2: Are there unintended consequences related to this rulemaking and how should they be addressed? Please provide a rationale for your response.

DEEP believes the NRC should evaluate the broader implications of the proposed rule beyond implementation within the National Materials Program. In particular, DEEP recommends that the NRC, as required by Section 5 of EO14300, work “with its DOGE Team, the Office of Management and Budget, and other executive departments and agencies as appropriate” to ensure that unintended regulatory conflicts are not created. DEEP has identified two areas of particular concern: (1) implementation under the Clean Air Act (CAA); and (2) consistency with Occupational Safety and Health Administration (OSHA) radiation protection regulations.

Overall, DEEP believes that coordination with EPA and OSHA prior to implementation of this rule would reduce the potential for conflicting Federal requirements, improve regulatory certainty for licensees and Agreement States, and promote consistent implementation of the Nation's radiation protection framework.

Clean Air Act Considerations

DEEP is concerned that the proposed increase in the radionuclide air emissions constraint in 10 CFR § 20.1101(d) from 10 mrem/year to 25 mrem/year could have unintended consequences under the CAA. In its 1989 decision not to regulate radionuclide emissions from NRC-licensed facilities under Section 112 of the CAA,⁸ the U.S. Environmental Protection Agency (EPA) concluded that additional regulation was not warranted because the maximum individual lifetime cancer risk (MIR) associated with NRC-regulated emissions, approximately 1.6×10^{-4} , was “essentially equivalent” to EPA’s presumptively safe risk level of approximately 1×10^{-4} . EPA

⁸ “National Emission Standards for Hazardous Air Pollutants; Radionuclides,” (Docket: FRL-3657-4) 54 Fed. Reg. 51654, (December 15, 1989).

further concluded that existing NRC requirements protected public health with an “ample margin of safety” because additional regulation to reduce MIR to 1×10^{-4} would produce only very small reductions in public health risk relative to the associated costs.

The proposed NRC rule significantly changes the assumptions underlying EPA’s previous determination. The Statement of Considerations indicates that a dose of 25 mrem/year corresponds to an estimated MIR of approximately 8.7×10^{-4} , substantially higher than the risk level EPA previously determined to be approximately equivalent to its presumptively safe benchmark. Moreover, the NRC acknowledges throughout the proposed rule that existing licensees generally operate well below the current 10 mrem/year constraint. Consequently, it is difficult to conclude that achieving current performance levels imposes prohibitive costs when licensees are already routinely meeting those levels.

DEEP also notes that the determination of whether emissions provide an “ample margin of safety” under Section 112(d)(9) of the CAA is a statutory determination vested in the EPA Administrator, not the NRC. Accordingly, even if the NRC adopts a higher radionuclide emissions constraint, EPA could independently conclude that radionuclide emissions exceeding the current 10 mrem/year level warrant regulation under the CAA, potentially resulting in overlapping or duplicative federal regulatory requirements.

Accordingly, DEEP recommends that the NRC formally coordinate with EPA before adopting any increase in the radionuclide emissions constraint. Specifically, DEEP recommends that EPA evaluate whether the proposed revised NRC framework continues to satisfy the CAA’s “ample margin of safety” determination and, if appropriate, issue that determination through a public Federal Register notice subject to public comment prior to the NRC finalizing the rule. Resolving this issue beforehand would provide greater regulatory certainty for licensees and help avoid the unintended creation of overlapping federal regulatory programs.

Occupational Safety and Health Administration Considerations

DEEP also recommends that the NRC coordinate with OSHA regarding implementation of the proposed rule. OSHA’s radiation protection standard, 29 CFR § 1910.1096, remains based on recommendations contained in ICRP Publication 2 (1960), whereas NRC regulations in 10 CFR Part 20 have, since 1990, reflected the more modern recommendations contained in ICRP Publications 26 and 30. As a result, OSHA’s radiation protection regulations remain inconsistent with the regulatory framework implemented by the NRC and Agreement States.

While 29 CFR § 1910.1096(p)(1) generally recognizes compliance with NRC regulations for employers subject to NRC jurisdiction, this accommodation does not extend to many other employers whose workers may be exposed to radiation sources regulated under state authority. As the NRC proposes additional revisions to its foundational radiation protection framework, these longstanding differences could become more pronounced.

DEEP is particularly concerned that the proposed graded approach to radiation protection, including the proposed revisions to 10 CFR § 20.1301 allowing higher public dose limits under certain circumstances, may further increase confusion for employers and employees if OSHA’s

regulations remain unchanged. Under the NRC's framework, employees whose assigned duties involve exposure to radiation are managed as occupationally exposed workers, while other employees remain subject to public dose limits unless otherwise classified. OSHA's regulations, however, do not incorporate this same graded approach and instead apply a single framework for all employee radiation exposure. As a result, employers may incorrectly conclude that non-radiation workers or other employees whose assigned duties do not involve radiation sources may nevertheless receive doses above the public dose limits authorized under proposed changes to 10 CFR § 20.1301, even though those employees remain subject to OSHA requirements. This disparity could create uncertainty regarding which regulatory framework applies, complicate implementation of the NRC's proposed public dose flexibility provisions, and result in inconsistent protection of similarly situated employees. Coordination between the NRC and OSHA is therefore particularly important before implementing the proposed changes to 10 CFR § 20.1301 to ensure that employers, regulators, and workers have clear, consistent expectations regarding permissible radiation exposures and the circumstances under which individuals should be managed as occupationally exposed workers.

Accordingly, DEEP recommends that the NRC coordinate with OSHA regarding the implementation of this rule and evaluate whether additional guidance, policy statements, or future rulemaking are necessary to promote consistency between the agencies. Greater consistency among NRC, OSHA, and state radiation protection requirements would reduce regulatory confusion, improve compliance, and further the shared objective of protecting workers while providing clear and consistent regulatory expectations.

Additional DEEP Comments

In addition to its perspectives related to the NRC's specific requests for comment, DEEP has identified several issues related to other provisions in the proposed rule. In particular, DEEP has concerns with:

- the removal of ALARA requirements
- the bases for the Finding of No Significant Impact (FONSI) in the NRC's Draft Environmental Assessment (EA) including:
 - reliance on historical dose as a predictor of future dose while eliminating ALARA
 - not properly evaluating the consequences of allowed increases in radioactive emissions
 - failure to address cross rulemaking considerations
 - failure to address interaction of simultaneous changes to ALARA requirements, dose management, occupational dose limits, public dose limits, and radioactive effluent constraints
 - failure to recognize a fourfold increase in MIR as environmentally significant

changes to audit requirements, and elimination of submission requirements for environmental monitoring reports. DEEP has a recommendation regarding eliminating the 2 mrem in any one-hour public dose limit. Finally, DEEP is supportive of planned occupational dose limit extensions and the use of alternative dosimetry standards. DEEP submits its detailed perspectives on these issues in the following additional comments:

DEEP Comment #1 - Removal of the ALARA Requirement

DEEP has significant concerns with the NRC's proposal to remove the regulatory requirement to maintain radiation exposures ALARA and replace it with a graded dose management framework. DEEP recognizes that the NRC has carefully distinguished this proposal from a wholesale abandonment of the linear dose-response model and instead characterizes the proposed rule as modifying the implementation of radiation protection while retaining a linear dose-response framework for establishing regulatory dose limits. Nevertheless, the NRC has failed to establish either a sufficient scientific or regulatory basis for eliminating one of the foundational principles of radiation protection that has guided Federal and Agreement State programs for decades.

Throughout Section III of the proposed rule, the NRC acknowledges several important points. The NRC concludes that there is presently no consensus-supported, regulation-ready alternative to the linear dose-response model, reaffirms that the current regulatory dose limits continue to provide reasonable assurance of adequate protection, rejects establishment of determinate thresholds for stochastic health effects because the available science does not support them, and recognizes that the underlying scientific understanding of radiation health effects has not materially changed in a manner that would justify replacing the current radiation protection framework. Rather than identifying deficiencies in the scientific basis of ALARA, the NRC instead argues that implementation of ALARA has become overly subjective, inconsistently applied, and susceptible to unnecessary conservatism.

DEEP agrees that regulatory requirements should be clear, consistent, and risk-informed. However, the concerns identified by the NRC regarding implementation of ALARA do not

support eliminating the ALARA requirement itself. If the NRC has identified inconsistencies in how ALARA has been interpreted or enforced, those concerns could be addressed through revised guidance, inspection procedures, or clarification of regulatory expectations without removing a well-established radiation protection principle that remains integrally embedded throughout domestic and international radiation protection practice.

The NRC's administrative record fails to provide any qualitative or quantitative documentary evidence demonstrating the regulatory experience supporting this change. Throughout the Statement of Considerations, the NRC repeatedly asserts that implementation of ALARA has resulted in excessive subjectivity, inconsistent enforcement, unnecessary conservatism, and unnecessary regulatory burden. However, the proposed rule provides no specific examples or quantitative data demonstrating the scope or frequency of these issues across the National Materials Program. As an Agreement State responsible for implementing compatible radiation protection regulations, conducting inspections, and taking enforcement actions, DEEP believes that such a significant departure from a long-established radiation protection principle should be supported by an administrative record containing robust qualitative and quantitative data. No such data is presented by the NRC. Accordingly, DEEP recommends that the NRC provide the empirical basis for these conclusions, including, where available, inspection findings, enforcement actions, licensing case studies, operational experience, or other objective data demonstrating that inconsistent implementation of ALARA is widespread and that these issues cannot be adequately addressed through revisions to guidance, inspection procedures, or policy clarification. Similarly, if the NRC concludes that ALARA has imposed unnecessary burdens or impeded the beneficial use of nuclear technology, the Statements of Consideration should identify specific examples where the ALARA requirement itself—rather than implementation choices made by individual licensees or regulators—resulted in unnecessary regulatory burden, delayed licensing decisions, or prevented beneficial activities. This information would provide the appropriate technical and policy basis for the proposed rule and allow Agreement States and other stakeholders to meaningfully evaluate whether eliminating the ALARA requirement is the most appropriate solution to the concerns identified by the NRC. This is particularly important given the limited 45-day public comment period and the concurrent review of multiple significant NRC rulemakings⁹, which severely restricted stakeholders' ability to independently develop and evaluate the extensive technical record necessary to assess a proposed change to one of the Nation's foundational radiation protection principles.

DEEP further notes that the NCRP, which Congress chartered to provide independent scientific guidance on radiation protection matters, has not recommended eliminating ALARA or abandoning optimization as a fundamental principle of radiation protection. NCRP Report No. 180 and NCRP Commentary No. 27 reaffirm the continued use of the Linear No-Threshold (LNT) model utilized by ALARA as the most practical and scientifically supportable basis for radiation protection policy while recognizing the uncertainties inherent in estimating risks at very low doses. NCRP Commentary No. 27 specifically evaluated the available epidemiological

⁹ "Modernizing Reactor Licensing, Safety Oversight, and Siting Practices," (Docket 2025-2025-0975), 91 FR 44560 (July 16, 2026); "Implementation of the National Environmental Policy Act," (Docket: NRC-2025-0478), 91 FR 42086 (July 7, 2026); "Modernizing Materials Licensing," (Docket: NRC-2025-1370), 91 FR 38124 (June 24, 2026); and, "Integrated Low-Level Radioactive Waste Disposal," (Dockets: NRC-2011-0012, NRC-2015-0003, and NRC-2017-0081), 91 FRN 40290 (July 1, 2026).

evidence from low-dose and low-dose-rate radiation exposure and concluded that the LNT model continues to represent the most prudent framework for radiation protection. Likewise, the ICRP continues to identify optimization, dose limitation, and justification as the three fundamental principles of radiation protection.

Importantly, the NRC itself acknowledges in the proposed rule that there is no consensus-supported alternative model to replace the current scientific framework and that the linear dose-response model (LNT) remains the most appropriate model upon which to base radiation protection standards. Based on DEEP's review of the proposed rule and the supporting references cited by the NRC, the proposed rule does not identify any recommendation from the NCRP, ICRP, or another broadly recognized scientific authority supporting removal of ALARA as a regulatory requirement. Given the breadth and complexity of this rulemaking, the concurrent review of multiple significant NRC rulemakings, and the limited 45-day public comment period, Agreement States and other stakeholders cannot reasonably be expected to independently conduct and validate a comprehensive review of the worldwide scientific literature to determine whether such a consensus has emerged outside the administrative record supporting this proposal. Accordingly, DEEP believes that significant changes to such a foundational component of radiation protection policy should be supported within the rulemaking record by a clearly identified evolution in the scientific consensus, rather than relying primarily on concerns regarding regulatory implementation.

DEEP also notes that as recently as 2021, the NRC denied petitions requesting removal of the LNT framework and ALARA requirements¹⁰. Although DEEP recognizes that the current proposal differs procedurally from those petitions by rejecting hormesis and retaining the linear dose-response (LNT) model as the basis for radiation protection standards, the Commission nevertheless reaches a substantially different regulatory conclusion regarding ALARA without identifying a corresponding change in the underlying scientific consensus. In its 2021 decision, the NRC concluded that the existing LNT-based framework, including ALARA, “continues to provide a sound regulatory basis for minimizing the risk of unnecessary radiation exposure to both members of the public and occupational workers.” Based on the information presented in the Statement of Considerations, DEEP does not find that the administrative record identifies new scientific evidence or consensus guidance developed since the Commission's 2021 decision that would warrant reversing its previous conclusion regarding ALARA. If such evidence exists, The NRC should clearly have identified and discussed such evidence in the administrative record to enable Agreement States and other stakeholders to meaningfully evaluate and comment on the basis for this significant policy change.

DEEP is also concerned that the proposed rule does not truly eliminate the concept of optimization but instead replaces the long-established ALARA principle with several new regulatory constructs that collectively require similar policy judgments while lacking the clarity and familiarity associated with ALARA. The proposed graded approach to dose management, consideration of competing risks when reducing radiation dose, and cost-benefit considerations associated with residual radioactivity all represent various forms of optimization. Consequently, the proposed framework appears to replace a single, well-understood radiation protection

¹⁰ “Linear No-Threshold Model and Standards for Protection Against Radiation,” (Docket: PRM-20-28, PRM-20-29, and PRM-20-30; NRC-2015-0057), 86 Fed. Reg. 45923, (August 17, 2021).

principle with multiple new concepts that themselves require substantial professional judgment and interpretation.

DEEP also notes that the terminology used in the proposed graded approach may create unnecessary confusion. Throughout the Statement of Considerations, the NRC appropriately distinguishes between scientific dose thresholds—that is, radiation dose levels below which stochastic health effects are known not to occur—and regulatory decision points used to trigger particular radiation protection measures. The NRC concludes that the available scientific evidence does not support establishing a biological threshold dose for stochastic health effects. At the same time, however, the proposed graded approach relies on numerous dose-based values that determine when specific radiation protection actions or expectations apply. Referring to these regulatory decision points as “thresholds” could unintentionally suggest that they represent scientifically established no-effect doses, contrary to the NRC's own discussion elsewhere in the proposed rule. DEEP therefore recommends that the NRC use terminology such as “dose action levels,” “dose management criteria,” “dose decision points,” or similar language throughout the proposed rule and any related guidance documents to clearly distinguish these regulatory implementation values from biological threshold doses. Doing so would improve clarity and reduce the potential for misunderstanding among licensees, regulators, Agreement States, and the public.

As Connecticut's Agreement State radiation control program, DEEP is also concerned about the practical implementation of the proposed changes. ALARA has been incorporated into radiation protection programs, licensing guidance, inspection procedures, licensee training programs, operational procedures, and safety culture throughout the National Materials Program for decades. Removing the regulatory requirement while retaining many of the underlying optimization concepts may create unnecessary confusion among licensees, inspectors, and regulators regarding regulatory expectations and inspection criteria. As currently proposed, many of the replacement concepts remain broadly stated and are themselves subject to inconsistent interpretation unless accompanied by comprehensive implementation guidance.

The proposed changes also have broader implications for public confidence. ALARA is widely recognized by radiation workers, licensees, medical institutions, industrial users, emergency responders, and members of the public as a cornerstone of modern radiation protection. As an Agreement State responsible for implementing compatible radiation protection requirements and communicating radiation risks directly to Connecticut residents, DEEP believes that removing this long-standing regulatory principle without a corresponding change in the underlying scientific consensus would significantly and unnecessarily undermine public confidence in radiation protection programs. Public confidence is strengthened when longstanding regulatory principles evolve in response to clear advances in scientific understanding rather than changes in regulatory philosophy alone.

DEEP further notes that the principal health concern associated with low-dose radiation exposure remains the potential for latent cancers that may not develop for many years or decades following exposure. Because potential health effects at low doses are inherently difficult to observe and evaluate over short time periods, the practical consequences of fundamentally altering long-standing radiation protection policy may not become evident for decades. This

delayed ability to evaluate outcomes further supports a cautious, science-driven approach before making major changes to nationally accepted foundational radiation protection principles.

Throughout the proposed rule, the NRC states that existing licensees may continue implementing their current radiation protection programs and that the proposed changes would not require licensees to alter existing practices. If the NRC believes that continued application of ALARA remains appropriate and expects many licensees to continue implementing ALARA voluntarily as part of their operational radiation protection and safety culture, DEEP questions the regulatory benefit of eliminating a longstanding requirement that has achieved broad acceptance and has become deeply embedded in radiation protection programs throughout the National Materials Program.

For these reasons, DEEP recommends that the NRC retain the ALARA requirement unless and until its removal is supported by recommendations from the NCRP or another broadly recognized scientific authority and accompanied by a clearly demonstrated scientific and regulatory basis. DEEP believes that maintaining a consistent, well-established framework for dose optimization remains essential for regulatory clarity, effective implementation, compatibility among Agreement States, and continued public confidence in radiation protection programs.

Finally, DEEP recommends that, should the rules be implemented as written, the NRC develop comprehensive implementation guidance describing how licensees and Agreement States are expected to implement and evaluate compliance with the proposed graded dose management framework. Because the proposed rule repeatedly identifies inconsistent implementation, selective enforcement, and unnecessary conservatism as principal justifications for removing ALARA, such guidance should include clear implementation criteria, inspection expectations, practical examples, and objective decision-making tools demonstrating how the proposed framework differs from existing ALARA practices.

DEEP Comment #2 - The NRC Should Reevaluate Its National Environmental Policy Act (NEPA) Finding Because the Proposed Radiation Protection Changes Could Increase Future Radiological Impacts

DEEP is concerned that the NRC's Draft EA does not adequately evaluate the potential environmental consequences of the proposed changes to the NRC's radiation protection requirements. In particular, the Draft EA repeatedly relies on the premise that any increases in occupational or public radiation exposure resulting from the proposed rule would remain below existing regulatory limits and therefore would not constitute a significant environmental effect.

The Draft EA expressly states that the proposed rule would introduce flexibilities that "may, at most, collectively result in small increases in dose below the current dose limits." The NRC then relies substantially on the fact that the existing dose limits would remain unchanged to conclude that the proposed amendments would not significantly affect the human environment. The Draft EA similarly concludes that the proposed removal of ALARA requirements would not have a significant environmental effect because the applicable dose limits would remain as upper bounds on permissible doses.

DEEP believes this reasoning is incomplete and inconsistent with the requirements of NEPA. The relevant question is not simply whether future exposures would remain technically below a regulatory limit. The question is whether the proposed regulatory changes could reasonably result in greater occupational or public exposures than under the existing regulatory framework and, if so, whether those changes have been adequately evaluated.

The proposed rule would materially change the regulatory framework governing radiation protection. In particular, the NRC proposes to remove specific requirements for occupational and public doses to be maintained ALARA and replace those requirements with a graded approach to dose management. The existing regulatory framework includes both dose limits *and* an independent requirement to reduce exposures to levels that are ALARA. Removing that independent requirement would allow licensees to operate at higher doses than would otherwise occur under the current framework, even though those doses remain below applicable regulatory limits.

The NRC therefore should not assume that historical dose experience under the existing ALARA-based framework is an appropriate predictor of future exposures under the proposed framework. There is extensive operational experience with facilities operating under ALARA requirements, but there is not comparable operational experience demonstrating what occupational and public exposures will look like over an extended period if licensees are permitted to routinely operate closer to regulatory limits. The absence of such operational experience makes it impossible to conclude categorically that future increases in exposure would be insignificant.

This concern is significant because the Draft EA identifies several provisions that could result in increased exposures. For example, proposed changes would establish an option for planned occupational dose limit extensions that could permit workers, under specified circumstances, to exceed annual occupational dose limits. The proposed changes to 10 CFR § 20.1301 would also permit, under certain circumstances, NRC authorization of a public dose limit above the existing 100 mrem/year limit for members of the public. The Draft EA acknowledges that this provision could authorize a public dose limit in excess of the existing regulatory limit, although the NRC states that such requests would receive separate, case-specific NEPA review.

The existence of a future case-specific NEPA review does not, however, eliminate the need for the NRC to adequately evaluate the environmental consequences of establishing the regulatory flexibility in the first place. The proposed rule would change the baseline against which future licensing and regulatory actions are evaluated. The NRC should therefore consider whether creating these new authorities and removing existing ALARA requirements could result in cumulative or reasonably foreseeable increases in radiation exposure that are not adequately captured by the Draft EA.

The proposed increase in the radionuclide air and liquid effluent constraint from 10 mrem/year to as much as 25 mrem/year also warrants additional environmental analysis. As DEEP explained in its response to the NRC's question #2 concerning the cumulative effects of regulation, the NRC's Statement of Considerations indicates that a dose of 25 mrem/year corresponds to an

estimated MIR of approximately 8.7×10^{-4} —more than four times the MIR associated with the existing 10 mrem/year constraint and substantially greater than the risk level EPA previously considered essentially equivalent to its presumptively safe benchmark. DEEP does not agree with the Draft EA's conclusion that such an increase is not significant merely because the revised constraint would remain below the 100 mrem/year public dose limit. A more-than-fourfold increase in estimated MIR is itself a potentially meaningful environmental change that warrants consideration under NEPA, particularly where the existing regulatory framework is being deliberately changed to permit higher releases. The NRC should therefore evaluate the environmental significance of this increased risk rather than treating compliance with the revised regulatory limit as sufficient evidence that the environmental impact would be insignificant. Moreover, the NRC acknowledges that existing licensees operate well below the current 10 mrem/year constraint. This further calls into question the Draft EA's reliance on the revised 25 mrem/year constraint as evidence that environmental impacts would remain insignificant. If licensees are already routinely achieving emissions substantially below 10 mrem/year, the NRC should explain why authorizing releases up to 25 mrem/year would not reasonably result in increased environmental impacts.

More broadly, the Draft EA appears to treat the existing regulatory limits as if they were both the relevant measure of environmental significance and a fixed indicator of the level of environmental protection. That approach is problematic where the proposed rule itself changes the requirements, constraints, and regulatory mechanisms governing radiation exposures and radioactive effluents. A regulatory limit is a compliance threshold; it is not a measure of the absence of environmental impact. An increase in exposure or radioactive releases can represent a significant environmental change even when the resulting exposure remains below a regulatory limit.

DEEP is also concerned that the NRC's approach could create an unintended circularity in its NEPA analysis. Under the proposed framework, the NRC changes the requirements governing radiation protection and effluent controls, concludes that the resulting increases would remain within the revised regulatory limits, and then uses compliance with those limits as a basis for concluding that the environmental effects of the regulatory changes are not significant. A NEPA analysis should instead independently evaluate whether the regulatory changes could reasonably increase impacts to human health or the environment.

The NRC's conclusion is particularly difficult to reconcile with the scope of the proposed rule. The proposed amendments affect numerous provisions across 10 CFR parts 19, 20, 30, 34, 35, 40, 50, 53, 61, 71, and 72. The changes include not only revisions to terminology or methods for demonstrating compliance, but substantive changes to ALARA requirements, dose management, occupational dose limits, public dose limits, and radioactive effluent constraints. The NRC should therefore provide a more robust analysis of the reasonably foreseeable environmental consequences of implementing these changes across the regulated community.

DEEP recognizes that regulatory limits remain an important component of radiation protection and that compliance with those limits is necessary to protect public health and safety. However, compliance with a regulatory limit should not be equated with an absence of environmental impact. Where the NRC is proposing to remove an independent ALARA requirement, create

new mechanisms for higher occupational and public exposures, and increase radioactive effluent constraints, the NRC should provide a NEPA analysis that evaluates those changes based on their potential environmental consequences rather than presuming that impacts will remain insignificant because they remain within regulatory limits. Accordingly, DEEP recommends that the NRC reconsider its Draft FONSI and provide additional environmental analysis sufficient to demonstrate that the proposed changes will not result in significant or materially different impacts to occupational health, public health, or the environment.

DEEP is also concerned that other concurrent NRC rulemakings rely on environmental assumptions that may be materially affected by the proposed changes to the radiation protection framework. For example, in its proposed revisions to 10 CFR Part 51¹¹, the NRC relies, in part, on conclusions that occupational and public radiation doses associated with continued operation and other activities “would continue to be well below regulatory limits.” These conclusions are significant because the NRC proposes to use determinations that radiological impacts are “small” as the basis for concluding that certain activities will not have significant environmental impacts and, in some circumstances, for supporting categorical exclusions.

The 10 CFR Part 51 rulemaking, however, does not appear to account for the proposed elimination of ALARA requirements under this separate rulemaking. The assumption that future occupational and public doses “would continue to be well below regulatory limits” is based in substantial part on historical operating experience under the existing radiation protection framework, including the ALARA requirement. If the NRC eliminates the regulatory requirement to maintain doses ALARA, the regulatory framework underlying that historical experience will have materially changed. Licensees could have greater flexibility to operate at doses closer to applicable regulatory limits without violating an NRC requirement, even if those doses remain below the limits. Consequently, the continued-low-dose assumption relied upon in the 10 CFR Part 51 environmental analyses may no longer be valid.

DEEP is concerned that the Draft EA for this rulemaking does not address this cross-rulemaking interaction. The Draft EA concludes that removing ALARA requirements would not have a significant environmental effect because applicable dose limits would remain unchanged and any resulting increases in dose would remain below those limits. At the same time, the NRC’s 10 CFR Part 51 rulemaking relies on historical dose experience and the expectation that future doses will continue to remain well below those same limits. The two rulemakings therefore appear to rely on different assumptions about the future radiation protection environment. The Draft EA does not evaluate whether eliminating ALARA could invalidate or materially alter the assumptions underlying the generic environmental conclusions proposed in 10 CFR Part 51.

DEEP believes where one rulemaking materially changes a regulatory requirement that serves as an underlying assumption for another rulemaking’s environmental analysis, the NRC should identify and evaluate that interaction. DEEP recommends that the NRC take affirmative responsibility for evaluating cross-rulemaking impacts rather than placing the burden on individual States to identify all potential interactions. Where a proposed regulatory change could

¹¹ “Implementation of the National Environmental Policy Act,” (Docket: NRC-2025- 0478), 91 FR 42086 (July 7, 2026).

render an existing generic environmental conclusion unreliable, the NRC should revisit that conclusion before finalizing either rulemaking.

DEEP Comment #3 - Elimination of Annual Radiation Protection Program Reviews (10 CFR § 20.1101(c))

DEEP is concerned with the proposed revision to 10 CFR § 20.1101(c), which would replace the current requirement that licensees review the content and implementation of their radiation protection program “at least annually” with a requirement to review the program only “periodically.” The proposed change removes a clear and objective regulatory requirement and replaces it with a vague standard that may be interpreted inconsistently among licensees and regulators.

The current annual review requirement provides certainty and consistency for licensees by establishing a clear minimum frequency for evaluating the effectiveness of radiation protection programs. Annual reviews help ensure that changes in operations, staffing, equipment, procedures, or regulatory requirements are identified and addressed in a timely manner before they result in performance deficiencies, compliance issues, or unnecessary exposures. Replacing “annually” with “periodically” creates uncertainty regarding what interval would be considered acceptable and could lead to significantly longer periods between reviews, particularly for smaller or lower-resource licensees. This would ultimately reduce the effectiveness of radiation protection programs and make oversight more difficult for Agreement States and the NRC.

Accordingly, DEEP recommends that the NRC retain the existing requirement for licensees to review radiation protection program content and implementation at least annually. Alternatively, if the NRC wishes to preserve flexibility through use of the term “periodically,” DEEP recommends that the NRC provide guidance clarifying that the review frequency should be risk-informed and commensurate with the type and complexity of licensed activities. For example, the review interval could align with NRC and Agreement State inspection frequencies, which are already risk-informed and based on the nature of the licensed program. Such an approach would preserve regulatory flexibility while maintaining consistency, predictability, and adequate oversight.

DEEP Comment #4 - Elimination of the Hourly Public Dose Limit in 10 CFR § 20.1301(a)(2)

DEEP is generally supportive of the proposed removal of the hourly public dose limit in 10 CFR § 20.1301(a)(2), which currently limits dose in any unrestricted area from external sources to 0.002 rem (2 mrem) in any one hour. For many licensed activities, this requirement can introduce unnecessary conservatism and operational burden where annual dose limits are sufficient to ensure protection of the public.

However, DEEP is concerned that eliminating this requirement entirely could introduce unwarranted risks for industrial radiography operations conducted under 10 CFR Part 34. Industrial radiography is typically performed at temporary job sites and is routinely conducted in

areas that may be occupied by members of the public, construction personnel, or other site workers who are not directly involved in the radiographic operation. In industrial radiography, the hourly public dose limit is commonly used to establish exclusion boundaries for radiographic exposures involving high-activity sources, often based on the assumption of properly functioning exposure devices and very short exposure durations.

In the event of an equipment malfunction, particularly a source becoming stuck in the exposed position, the current hourly limit provides an important safety margin to prevent excessive public dose while corrective actions are taken. Events involving stuck radiography sources are not uncommon and continue to be reported to the NRC. If radiography boundaries are instead established solely based on compliance with the 100 mrem annual public dose limit, there is a risk that a member of the public could exceed that annual limit in less than an hour during an abnormal event.

For example, for a typical 150 curie iridium-192 radiography source, under the proposed framework a radiographer could establish an exclusion boundary of approximately 20 feet and remain compliant with the 100 mrem annual public dose limit, assuming a planned exposure duration of only a few minutes. However, if the source became stuck in the exposed position for even five additional minutes beyond the planned exposure time, an individual at the boundary could receive more than 250 mrem, exceeding the annual public dose limit in a single event.

Accordingly, DEEP recommends that the NRC consider removing the hourly public dose limit from Part 20 for most licensed activities but retain a specific external dose-rate boundary requirement for industrial radiography in 10 CFR Part 34. Such a requirement need not be as restrictive as the current 2 mrem in any one-hour standard but should remain some reasonable fraction of the public dose limit in order to provide sufficient time for recognition of abnormal conditions and corrective action before members of the public could receive doses approaching or exceeding regulatory limits.

DEEP Comment #5 - Elimination of Submission Requirements for Environmental Monitoring Reports under 10 CFR §§ 50.36a(a)(2) and 53.1645(a)

DEEP is concerned with the proposed elimination of requirements for nuclear power plant licensees to submit environmental monitoring and radiological effluent reports under 10 CFR §§ 50.36a(a)(2) and 53.1645(a). While the NRC indicates that licensees would still be required to prepare and maintain these reports, eliminating their submission to the NRC would remove them from the public record and reduce transparency regarding the environmental performance of nuclear facilities.

DEEP has found these reports to be valuable in demonstrating to the public that existing nuclear facilities do not have adverse impacts on public health or the environment. Routine environmental monitoring and effluent reports provide objective evidence that plants are operating within regulatory limits and that releases remain well below levels of concern. This information has been important in responding to public questions and maintaining confidence in existing facilities.

As states and the federal government work to accelerate deployment of advanced nuclear technologies and address growing electricity demand, public confidence will be essential to the successful siting and operation of new facilities. Transparent access to information demonstrating that nuclear facilities are not adversely affecting the environment is critical to building and maintaining that trust. Eliminating the public availability of these reports is not consistent with the broader objective of supporting expanded nuclear deployment under the President's energy and permitting initiatives.

Further, because licensees would still be required to prepare and retain the reports, eliminating submission does not appear to provide any meaningful burden reduction or cost savings to licensees. Rather, the principal effect of the change would be to reduce public access to information that is already being generated.

Accordingly, DEEP recommends that the NRC retain the existing requirement for submission of these reports. Alternatively, if the NRC wishes to eliminate formal submission, the regulations should, at a minimum, require licensees to post the reports publicly on their websites or otherwise make them readily available to the public upon request.

DEEP Comment #6 - Alternative Dosimetry Methods under 10 CFR § 20.1010

DEEP supports the proposed addition of 10 CFR § 20.1010 to allow the use of alternative dosimetry methods. This flexibility would allow licensees to use more current scientific models, dose coefficients, tissue weighting factors, and other methodologies that reflect the most recent developments in radiological protection science. Allowing use of updated approaches can improve the accuracy and realism of dose assessments and help ensure that regulatory decisions are informed by the best available science.

DEEP also supports the NRC's approach of allowing alternative dosimetry methods that are consistent with recognized consensus standards and peer-reviewed scientific methodologies. This approach provides a pathway for licensees to adopt more modern dosimetry frameworks while maintaining sufficient regulatory oversight and consistency.

At the same time, DEEP emphasizes that successful implementation of this provision will depend heavily on the NRC providing detailed guidance, training, and technical support to Agreement State regulators. Many Agreement States have limited staff resources and may not have in-house expertise in advanced dosimetry modeling or the nuances of differing international methodologies. Without sufficient guidance, there is a risk of inconsistent review and implementation among Agreement States and the NRC.

Accordingly, DEEP recommends that the NRC develop comprehensive implementation guidance, including examples, acceptable methodologies, and clear expectations for demonstrating compliance. DEEP also encourages the NRC to provide formal training opportunities for Agreement State staff, including workshops, webinars, and technical reference materials, prior to implementation of the final rule. Such efforts will be important to ensure consistent oversight across the National Materials Program and to avoid unnecessary delays or confusion during licensing and inspection activities.

DEEP Comment #7 - Planned Occupational Dose Limit Extensions under 10 CFR § 20.1205

DEEP supports the proposed addition of 10 CFR § 20.1205 to allow planned occupational dose limit extensions based on cumulative dose received over a five-year period. The proposed provision reflects the scientific understanding that radiation risk is influenced not only by total dose, but also by the time period over which that dose is received. In particular, chronic occupational exposures received over an extended period are generally understood to present different risks than acute exposures received over a short duration.

The proposed approach provides a practical and common-sense framework that allows licensees greater flexibility to manage work activities, outages, maintenance, and other infrequent situations where additional occupational dose may be warranted, while still maintaining reasonable cumulative dose controls. DEEP believes the proposed five-year cumulative limits, annual caps, and written authorization requirements provide an appropriate balance between flexibility and worker protection.

DEEP also believes this approach may improve efficiency for both licensees and regulators. For licensees, the provision offers a more workable means of managing worker dose across multiple years without relying on more burdensome or inflexible approaches. For Agreement State regulators, the use of clearly defined cumulative limits and documentation requirements provides a straightforward framework for inspection and oversight.

Overall, DEEP supports the proposed planned occupational dose limit extension as a reasonable modernization of the occupational dose framework that reflects current scientific understanding while maintaining adequate protection of workers.