

Public Meeting ADVANCE Act Section 507 Reactor Oversight Process

January 15, 2025

ADVANCE Act Section 507 Public Meeting

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 **U.S.NRC**
United States Nuclear Regulatory Commission
Protecting people and the environment

Time	Topic	Speaker
9:30am	Introductions and Opening Remarks	NRC & NEI
9:35am	Opening Remarks from the Core Team	NRC
9:40am	Update to “Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024” (ADVANCE Act) Section 507 Oversight and Inspection for Operating Reactors	Phil McKenna, NRC
10:10am	Open Discussion	NRC, NEI, Industry
10:40am	Additional Opportunity for Public Comments	Members of the Public
11:45am	Action Items & Closing Remarks	NRC & NEI
Noon	Meeting Adjourn	

Non-NRC participants, please send an email to Brian.Benney@nrc.gov to record your attendance.

Materials are available at the following link:

<https://www.nrc.gov/pmns/mtg?do=details&Code=20241443>



Introductions and Opening Remarks



Purpose

To share information and gather comments on ADVANCE Act Section 507 – Improving Oversight and Inspection Programs through:

- An Overview of ADVANCE Act Section 507
- A Discussion of NRC Staff Ideas Considerations
- Identification of Opportunities

This meeting was first noticed on December 11, 2024



ADVANCE Act Overview



Opening Remarks

NRC Core Team

For the Implementation of the ADVANCE Act of 2024

Luis Betancourt, Executive Technical Assistant

Annie Ramirez, Executive Technical Assistant

Aaron McCraw, Sr. Communications Specialist







For Upcoming and Past Meetings



ADVANCE Act (Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024)



Public Meetings

- Upcoming Meetings
- Past Meetings

Questions, Comments, or Ideas

- Contact Us about the ADVANCE Act

Provide Comments or Feedback



As we assess the considerations we are presenting here today, we welcome any feedback from the industry or members of the public.

<https://www.nrc.gov/about-nrc/governing-laws/advance-act/contactus.html>



ADVANCE Act Section 507 Reactor Oversight Process

Phil McKenna
Deputy Director Division of Reactor Oversight
NRR/DRO
Philip.McKenna@nrc.gov



ADVANCE Act Implementation

- Section 507 of the ADVANCE Act requires that not later than 1 year (July 9, 2025) the Commission shall submit a report to Congress that identifies specific improvements to the nuclear reactor and materials oversight and inspection programs that the Commission may implement to maximize the efficiency of such programs through, where appropriate, the use of risk-informed, performance-based procedures, expanded incorporation of information technologies, and staff training.
- Report Contents:
 - (1) assess specific elements of oversight and inspections that may be modified by the use of technology, improved planning, and continually updated risk-informed, performance-based assessment, including—
 - (A) use of travel resources;
 - (B) planning and preparation for inspections, including entrance and exit meetings with licensees;
 - (C) document collection and preparation, including consideration of whether nuclear reactor data are accessible prior to onsite visits or requests to the licensee and that document requests are timely and within the scope of inspections; and
 - (D) the cross-cutting issues program



ADVANCE Act Implementation

- Report Contents (con't):
 - (2) identify and assess measures to improve oversight and inspections, including—
 - (A) elimination of areas of duplicative or otherwise unnecessary activities;
 - (B) increased use of templates in documenting inspection results; and
 - (C) periodic training of Commission staff and leadership on the application of risk-informed criteria for—
 - (i) inspection planning and assessments;
 - (ii) agency decision-making processes on the application of regulations and guidance; and
 - (iii) the application of the Commission's standard of reasonable assurance of adequate protection;
 - (3) assess measures to advance risk-informed procedures, including—
 - (A) increased use of inspection approaches that balance the level of resources commensurate with safety significance
 - (B) increased review of the use of inspection program resources based on licensee performance;
 - (C) expansion of modern information technology, including artificial intelligence and machine learning, to risk-inform oversight and inspection decisions; and
 - (D) updating the Differing Professional Views or Opinions process to ensure any impacts on agency decisions and schedules are commensurate with the safety significance of the differing opinion

ADVANCE Act Implementation

- Report Contents (con't):
 - (4) assess the ability of the Commission, consistent with the mission of the Commission, to enable licensee innovations that may advance nuclear reactor operational efficiency and safety, including the criteria of the Commission for imely acceptance of licensee adoption of advanced technologies, including digital technologies;
 - (5) identify recommendations resulting from the assessments described in paragraphs (1) through (4);
 - (6) identify specific actions that the Commission may take to incorporate into the training, inspection, oversight, and licensing activities, and regulations, of the Commission, without compromising the mission of the Commission, the recommendations identified under paragraph (5); and
 - (7) describe when the actions identified under paragraph (6) may be implemented.



Schedule

- Public meeting (December 10, 2024)
(Observation)
- Public meeting for comments and feedback
(January 15, 2025) (Comment Gathering)
- ROP Bi-monthly meeting (January 29, 2025)
(Observation)
- SECY to Commission (TBD 2025)
- Report to Congress (July 9, 2025)
- Implementation (ongoing)



Current Implementation Activities

- HQ Regional Assistance on Inspections Issues:
 - Clarify limit for effort expended on very low safety significant issues before management engagement and evaluation of VLSSIR criteria
- Engineering inspections
 - Scheduled effectiveness review to begin 4th quarter 2025 to identify any changes
- Emergency preparedness
 - Emergency Response Facility (ERF) Performance Indicator
 - Significance Determination Process (SDP) Revision
- Security
 - Working group to revise SDP
- Cyber Security
 - Working group to evaluate the structure, staffing, and frequency of the inspection procedure (IP) 71130.10, "Cybersecurity."



Topics Under Consideration

United States Nuclear Regulatory Commission
Protecting people and the environment

- Reactor Oversight Process (ROP) Re-baseline
 - New Performance Indicators (PIs)*
 - Holistic review of all baseline inspection procedures based on new PIs*
 - PI&R Inspection review*
 - Complete effectiveness review of current quadrennial Engineering Inspection cycle*

*Management Directive (MD) 8.13 governs Commission notification and approval of ROP revisions.



Topic Under Consideration U.S.NRC

United States Nuclear Regulatory Commission

Protecting people and the environment

- Credit sustained Column 1 performance in Action Matrix*
 - Adjust PI&R team inspection frequency and number of members*
 - Reduce baseline samples*

*Management Directive (MD) 8.13 governs Commission notification and approval of ROP revisions.



- Items that could be done in current inspection year:
 - Comprehensive Engineering Team Inspection (CETI) reduced by one inspector (7 down to 6 persons).
 - Revise guidance on when going to minimum samples may be appropriate based on equipment risk.
 - Revise team inspection IPs so that there is one week on site and one-week remote inspection effort with a provision for one team member to return to the site to complete any required inspection effort after the remote week.



Inspection Finding Screening and Documentation Ideas

- Cross-cutting Issues Program Revision*
- Evaluate current practice of dual-path findings (Reactor Oversight Process and Traditional Enforcement)
- Reduce scope of documentation for Green/SL-IV findings/Non-Cited Violations
 - Similar to Licensee-Identified Violations with more description of the issue.

*Management Directive (MD) 8.13 governs Commission notification and approval of ROP revisions.



Assessment Ideas

- Licensee-identified White findings/violations would not result in Action Matrix movement
 - Targeted follow-up (IP 71152) or supplemental (IP 95001) inspection would still occur
- White findings would no longer aggregate to a Degraded Cornerstone*

*Management Directive (MD) 8.13 governs Commission notification and approval of ROP revisions.



Team Inspection Ideas

- Entrance meeting would by exception
- Virtual exit meetings unless otherwise indicated
- NRC Requests for Licensee Documentation: Upgraded NRC Library to simplify access to documentation already in NRC possession
- Reduce onsite time to one week and make other week remote (for two-week inspections)



Longer-Term Ideas

- Re-evaluation of Performance Indicators (PIs)
 - Potential to shift more oversight from inspection to PIs
 - Simplify submission process
- Engineering inspection changes
 - Proposed for start of new cycle January 2027
- Organizational Structures



Implementation

- Management Directive (MD) 8.13 governs Commission notification and approval of ROP revisions.
 - Options for major ROP revisions will be in SECY to Commission in 2025. This will include Commission notification items.
 - Some items may be implemented before report to Congress



Evaluation Criteria

- Is the proposed option within the scope of the ADVANCE Act?
- If the proposed option is not in the scope of the ADVANCE Act, does it meet the intent of the ADVANCE Act Section 507 discussion to improve NRC efficiency through optimization of risk-informed, performance-based oversight?
- Would the proposed option result in a reduction of reasonable assurance of adequate protection because of a gap in oversight. (consider using the Be riskSMART framework)?
- Could the Agency continue to achieve its oversight mission if the proposed change is enacted?
- If the proposed option does not result in an unacceptable gap in NRC oversight, then does the proposed option improve efficiency for the Agency and also not inappropriately shift burden to external stakeholders?



Evaluation Criteria (Con't)

- Does the proposed option also meet the remaining POGR goals (i.e., openness, independence, clarity, reliability)?
- Was the proposed option considered before and not approved by the Commission? If yes, does it meet the intent of the Advance Act and should it be considered in the Section 507 effort?
- Other guidance the project team used:
 - The revision should not interject subjectivity into the ROP.
 - Maintaining the Action Matrix structure would ease the ROP revision and retain how the Agency responds to declining licensee performance.
 - Retain current resident inspector site manning structure.



Industry Comments



Public Comments



Closing Remarks

