

ROP Bi-Monthly Meeting *ADVANCE Act Section 507* *ROP Revisions*

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Purpose

- To give a summary of the Agency's response to Section 507 of the ADVANCE Act for the Reactor Oversight Process to date.
- Discuss changes in implementation plan from the discussion at the June 5, 2025 ROP Bi-monthly meeting.
- Discuss the NRC's plans for the revision to the ROP Baseline Inspection Program.

ADVANCE Act Section 507 Report to Congress

- Signed by the Commission on July 10, 2025 (ML25077A245).
- The Report acknowledges that on May 23, 2025, Executive Order (EO) 14300, "Ordering the Reform of the Nuclear Regulatory Commission" was issued and directed the NRC to take additional actions to reform the NRC. Section 5 of EO 14300 directs the NRC to revise its regulations and guidance documents to facilitate nuclear technology deployment. As part of these efforts, Section 5(g) directs the NRC specifically to "[r]evise the Reactor Oversight Process [(ROP)] ... to reduce unnecessary burdens and be responsive to credible risks."

ADVANCE Act Section 507 Report to Congress

- The Report is organized by the sub-paragraphs in Section 507 of the ADVANCE Act.
- Table 1 - Completed NRC Actions Related to ADVANCE Act Section 507.
- Table 2 - Ongoing NRC Actions Related to ADVANCE Act Section 507.
- Table 3 - Potential Future NRC Actions Under Development Related to ADVANCE Act Section 507.

Recommendations from the Advance Act

Section 507 Report to Congress

- Use of Travel Resources (Section 507(d)(1)(A))
- Planning and Preparation for Inspections (Section 507(d)(1)(B))
- Document Collection and Preparation (Section 507(d)(1)(C))
- The Cross-Cutting Issues Program (Section 507(d)(1)(D))
- **Elimination of Areas of Duplicative or Otherwise Unnecessary Activities (Section 507(d)(2)(A))**
- Increased Use of Templates in Documenting Inspection Results (Section 507(d)(2)(B))
- Periodic Training of Commission Staff and Leadership on the Application of Risk-Informed Criteria (Section 507(d)(2)(C))
- **Increased Use of Inspection Approaches that Balance the Level of Resources Commensurate with Safety Significance (Section 507(d)(3)(A))**
- **Increased Review of the Use of Inspection Program Resources Based on Licensee Performance (Section 507(d)(3)(B))**
- **Expansion of Modern IT to Risk-Inform Oversight and Inspection Decisions (Section 507(d)(3)(C))**
- 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 (Section 507(d)(3)(D))
- Assessment of the Commission's Ability to Enable Licensee Innovations that May Advance Nuclear Reactor Operational Efficiency and Safety (Section 507(D)(4))

ADVANCE Act Section 507 Report to Congress

- “Further, as a result of the staff’s assessment, the NRC also determined that a broad, comprehensive review of the ROP would allow for consideration of improvements in industry performance and advancements in technology. This comprehensive review will also provide the NRC with a mechanism to further revise the ROP consistent with the direction in EO 14300. This ongoing action is expected to yield resource savings of approximately 30% by leveraging existing data on plant performance, revising inspection procedures to better incorporate risk insights and historical trends in inspection findings, and optimizing how baseline inspections are distributed between resident and regional inspectors.”

ADVANCE Act Section 507 Report to Congress

- “From 2020 to 2024, the agency reduced the expected resources required to complete baseline inspections under the ROP by about 12% through initiatives that better risk-inform the program.”
- “Building on this progress and informed by NRC staff and industry feedback, the NRC initiated a comprehensive review of the entire ROP in 02 of CY 2025. This effort is expected to further reduce ROP baseline inspection resources by approximately 30%. This review draws on 25 years of program execution to update the ROP to reflect the current state of industry performance, updated risk insights, and advancements in technology.”

Performance Indicator Revision

- NRC working group formed in May to review revision of ROP Performance Indicators.
- The NRC held the first of several planned industry workshops related to this review on June 5, 2025 with a follow-up meeting on June 26, 2025.
- Discussion of a 2nd workshop on July 22 which not scheduled.
- Change in effort to focus on data available to inspectors
 - Data will inform inspection samples
 - Individual PI Revisions will still be pursued

Revise the ROP Baseline Inspection Program

- The effort has been shifted significantly
- Ideally a major revision to the ROP would occur at the beginning of a calendar year
 - Effort was originally planned for implementation in January 2027
 - Goal is now to implement in January 2026
 - Preliminary work conducted for Section 507 of the ADVANCE Act permits this acceleration
 - Commission approval of the revised baseline inspection is required
- Back-up plan will be developed if Commission requires additional time to evaluate the staff's recommendations.

Revise the ROP Baseline Inspection Program

- The goal is to issue a notation vote SECY on the recommended revised ROP Baseline Inspection Program by October 15, 2025
- ROP Baseline Revision will cover all cornerstones and the following specific programs:
 - Resident Inspector Baseline Inspection
 - Engineering Inspection
 - Problem Identification and Resolution (PI&R)
 - Radiation Protection / Health Physics
 - Physical Security*
 - Emergency Preparedness
 - Cyber Security

*Revisions to the Force on Force Inspection Program will most likely be covered in a separate SECY

Items Discussed in SECY 25-0045 that will be under Consideration for ROP Baseline Review

- PI&R
- Team Inspection moves to IMC 2515 Appendix C.
- “Keeping PI&R team inspection in the baseline inspection program, decreasing its frequency to triennial, and reducing the team size by one member.”
- “Keeping PI&R team inspection in the baseline inspection program, decreasing its frequency to triennial, reducing the team size by two members.”
- “Reducing the problem identification and resolution team inspection frequency for plants designated as sustained Column 1 performance.”

Items Discussed in SECY 25-0045 that will be under Consideration for ROP Baseline Review

- Engineering Inspection Program
- “Maintaining the 4-year inspection cycle for engineering inspections until the end of the current quadrennial cycle and the staff would reevaluate it following the effectiveness review in CY 2026 (in time to make revisions for the next cycle beginning in January 2027).”
- “Maintaining the 4-year inspection cycle for engineering inspections with only one new Focused Engineering Inspection (FEI), for a total of three engineering inspections in any 4-year cycle.”
- “Implementing the above option using a 5-year engineering inspection cycle. The staff would maintain three FEIs and one Comprehensive Engineering Team Inspection and use the fifth year to conduct a comprehensive effectiveness review of the program.”
- “Implementing a 4-year inspection cycle. The staff would replace the Comprehensive Engineering Team Inspection with two Safety System Design Inspections and one Focused Engineering Inspection for a total of three engineering inspections in any 4-year cycle.”
- “Completely revising the engineering inspection program to conduct periodic reviews of risk-significant engineering areas and programs to include an option for engineering response inspections for emergent issues.”

Revise the ROP Baseline Inspection Program

- Future Engagements with Industry and Public
 - Radiation Protection Cornerstone Baseline Inspection comment gathering public meeting completed on July 18.
 - ROP Rebaseline will have a comment gathering public meeting on either August 19 or 20.
 - Next ROP Bi-monthly Meeting on September 24.

Questions?