

# Hybrid Workshop to Support Comprehensive Review of Radiation Safety Cornerstones in Reactor Oversight Process

July 18, 2025

ADAMS Accession No. ML25199A022

<https://www.nrc.gov/pmns/mtg?do=details&Code=20250885>

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# Announcements/Introductions

Please identify yourself each time before speaking throughout the meeting.

# Meeting Agenda

## PUBLIC MEETING AGENDA

Hybrid Workshop to Support Comprehensive Review of Radiation Safety Cornerstones in Reactor Oversight Process

July 18, 2025, 09:00 AM to 12:00 PM ET

Virtual and In-Person at NRC HQ, One White Flint North  
11555 Rockville Pike  
Rockville, MD

### **Time**

0900 ET  
0915-1000 ET  
1000-1045 ET  
1045-1100 ET  
1100-1145 ET  
1145-1200 ET  
1200 ET

### **Topic**

Introductions/Kickoff  
NRC Presentation  
Workshop Presentation/Discussion  
Break  
Discussion  
Public Comments  
Adjourn

### **Speaker**

NRC  
NRC  
Participants  
  
Participants  
Public  
NRC



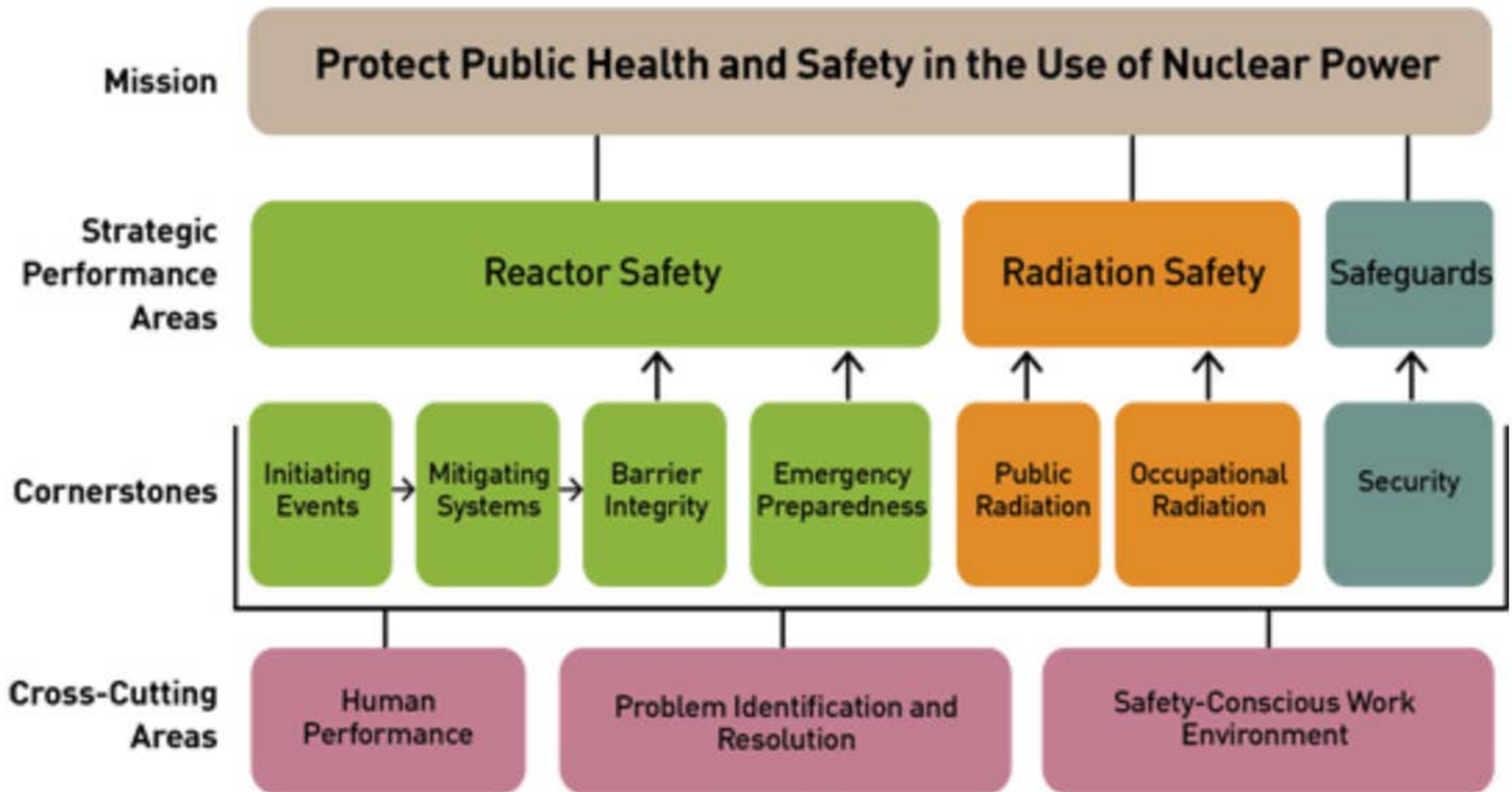
# NRC Opening Remarks

Meena Khanna, Director (Acting) Division of Risk Assessment

Office of Nuclear Reactor Regulation



# Reactor Oversight Process (ROP)



# Why Oversight?

- Atomic Energy Act
- Industry and NRC and have roles in ensuring safety
  - Operate safely
  - Independently conclude...
- Inspections help confirm that U.S. nuclear power plants are meeting their responsibilities

Independently conclude...



## Oversight of Nuclear Power Plants

### Background

The NRC and the nuclear industry both have roles ensuring the safety of U.S. nuclear power plants and their ability to protect workers and the public from radiation. The NRC's regulations and guidance cover both the construction and operation of nuclear reactors. Utilities are responsible for meeting those regulations to design, build, and operate their facilities safely. The NRC also approves plant-specific changes that must be properly implemented by the plant operators. All of this work helps ensure safe plant operation, as well as safe plant shutdowns in the event of an accident. The NRC's licensing and oversight programs confirm that U.S. nuclear power plants are meeting their responsibilities.

The NRC's objective, timely, and risk-informed oversight assesses plant performance. More information on this Reactor Oversight Process is available on the NRC's [website](#).

### Inspection Program

The Atomic Energy Act of 1954 provides the NRC's inspection authority to inspect nuclear power plants to protect public health and safety. NRC inspections assess whether licensees are properly conducting operations and maintaining equipment to ensure safe operations. Inspectors monitor the licensee's activities and provide findings to the licensee's management. If necessary, NRC experts conduct follow-up inspections to ensure that the licensee has addressed its findings.

Most NRC reactor inspections are conducted by our resident and regional inspectors. Since 1977, resident inspectors have been stationed at each nuclear power plant to provide first-hand, independent assessment of plant conditions and performance. Resident inspectors live near the nuclear power plant they oversee. They maintain offices at the plant during regular business hours, and monitor plant activity during overnights, weekends and holidays, as needed. Resident inspectors provide quick NRC response to incidents at the plant.

Engineers and specialists from the nearest NRC regional office and/or headquarters support the resident inspectors. The NRC's regional specialists cover areas such as plant security, emergency planning, radiation protection, environmental monitoring, plant equipment and systems, fire protection, and construction activities.





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200  
ATLANTA, GEORGIA 30303-1200

March 11, 2025

Delson Erb  
Vice President, OPS Support  
Tennessee Valley Authority  
1101 Market Street, LP 4A-C  
Chattanooga, TN 37402-2801

SUBJECT: ANNUAL ASSESSMENT LETTER FOR SEQUOYAH NUCLEAR PLANT,  
UNITS 1 AND 2 - REPORT 05000327/2024006 AND 05000328/2024006

Dear Delson Erb:

The Nuclear Regulatory Commission (NRC) has completed its end-of-cycle performance assessment of Sequoyah Nuclear Plant, Units 1 and 2, reviewing performance indicators (PIs), inspection results, and enforcement actions from January 1, 2024 through December 31, 2024. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. The NRC concluded that overall performance at your facility preserved public health and safety. The baseline inspection program was completed at your facility as defined in Inspection Manual Chapter 2515, "Light-Water Reactor Inspection Program - Operations Phase."

The NRC determined the performance at Sequoyah Nuclear Plant, Units 1 and 2, during the most recent quarter was within the Licensee Response Column (Column 1), the highest performance category of the NRC's Reactor Oversight Process (ROP) Action Matrix, because all inspection findings had very low safety significance (i.e., Green), and all PIs were within the expected range (i.e., Green). Therefore, the NRC plans to conduct ROP baseline inspections at your facility.

The enclosed inspection plan lists the inspections scheduled through December 31, 2026. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last 12 months of the inspection plan are tentative and may be revised. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. The NRC concluded that overall performance at your facility preserved public health and safety. The baseline inspection program was completed

Eric S. Carr  
Chief Nuclear  
President  
and Chief  
Dominion Energy  
Innsbrook  
5000 Dominion  
Glen Allen, VA

SUBJECT:

Dear Eric Carr:

The U.S. NRC  
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The enclosed inspection plan lists the inspections scheduled through December 31, 2026. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last twelve months of the inspection plan are tentative and may be revised. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.



Jamie M. Cole  
Regulatory Aff  
Southern Nucl  
3535 Colonna  
Birmingham, AL

SUBJECT:

Dear Jamie M. Cole:

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SUBJECT:

Dear Adam C.

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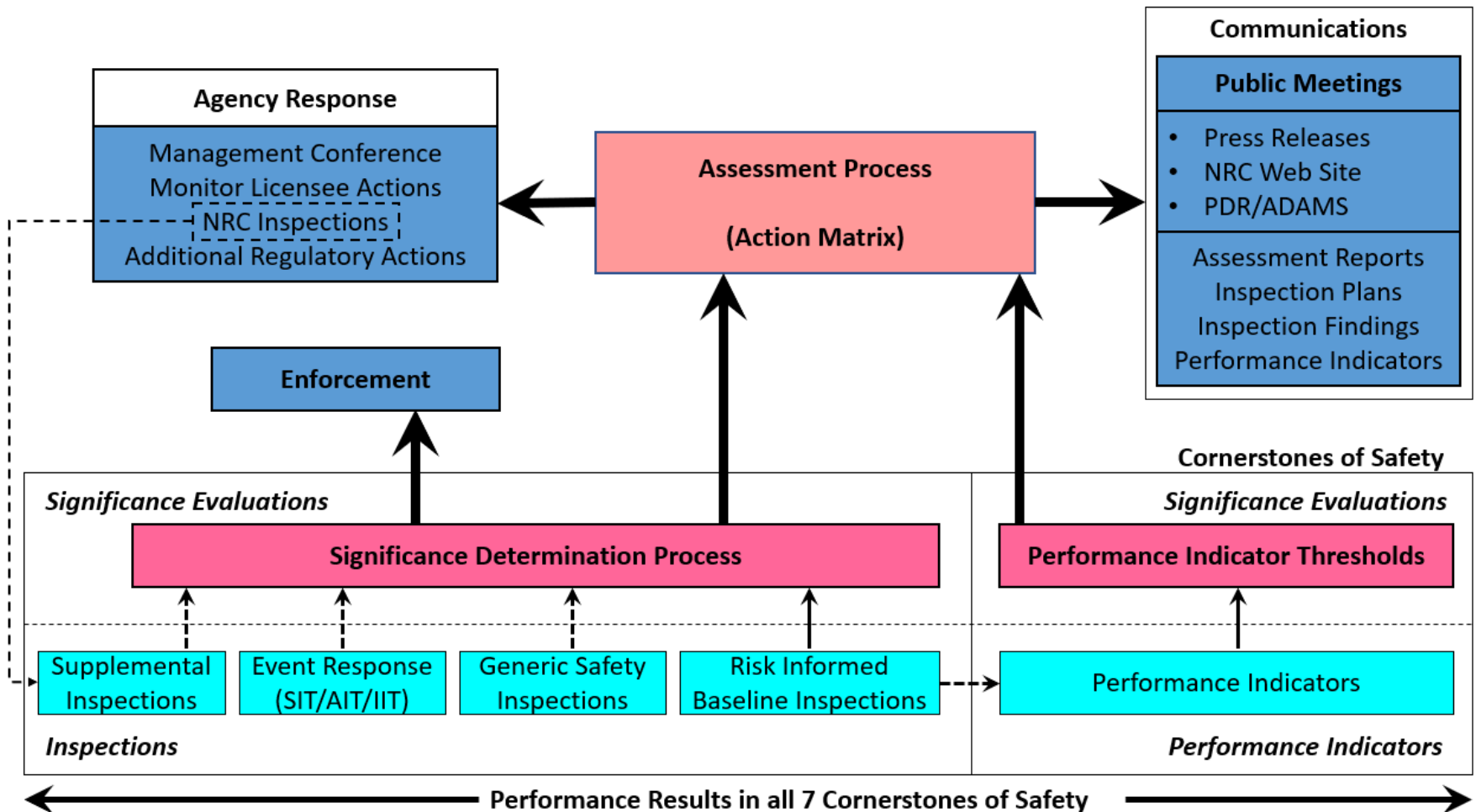
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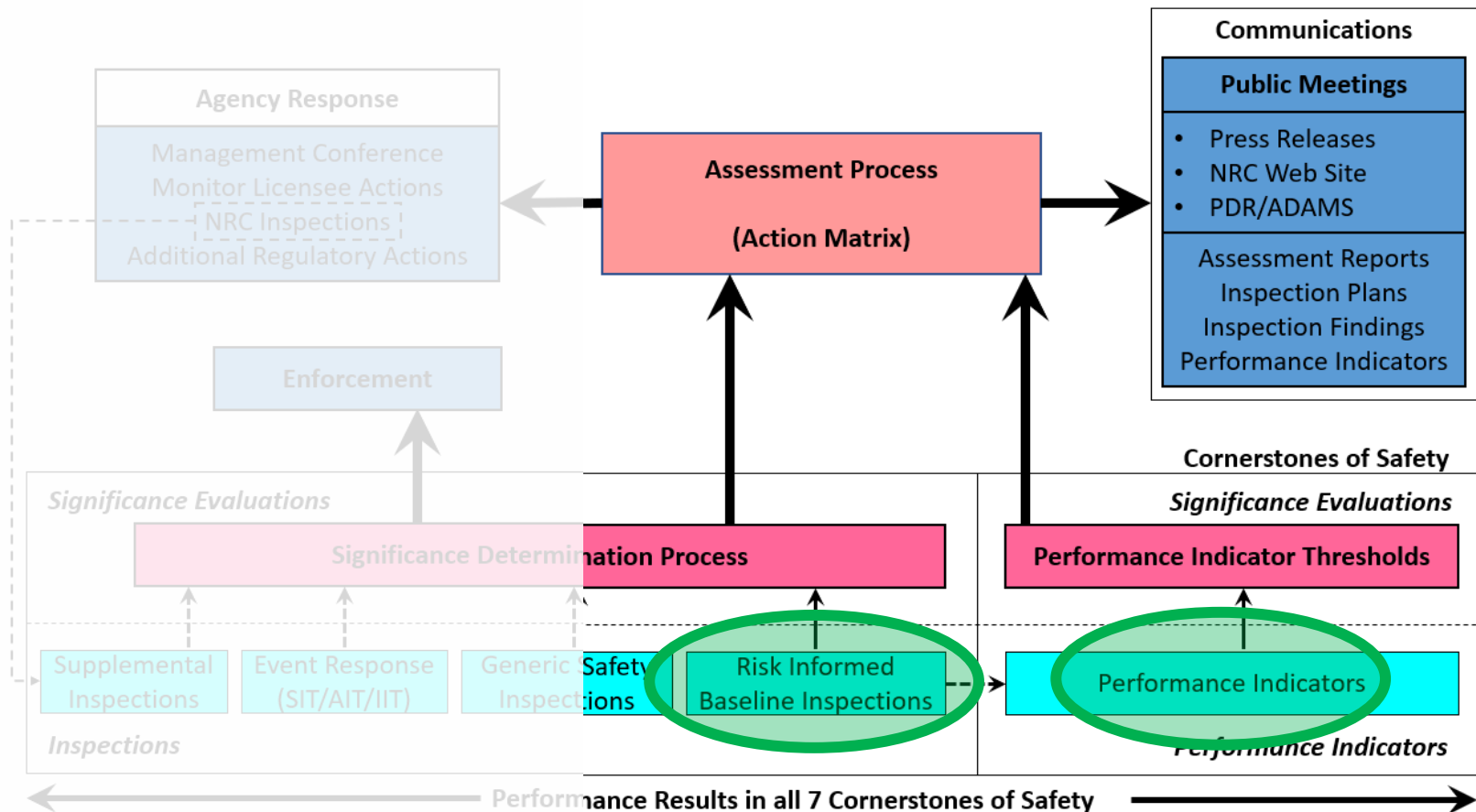


# Assessment of Plant Performance





# Assessment of Plant Performance



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# Radiation Safety Inspection Procedures

IP	<u>71124.01</u>	Radiological Hazard Assessment and Exposure Controls
IP	<u>71124.03</u>	In-Plant Airborne Radioactivity Control and Mitigation
IP	<u>71124.04</u>	Occupational Dose Assessment
IP	<u>71124.05</u>	Radiation Monitoring Instrumentation
IP	<u>71124.06</u>	Radioactive Gaseous and Liquid Effluent Treatment
IP	<u>71124.07</u>	Radiological Environmental Monitoring Program
IP	<u>71124.08</u>	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation

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# Developing Inspectable Areas

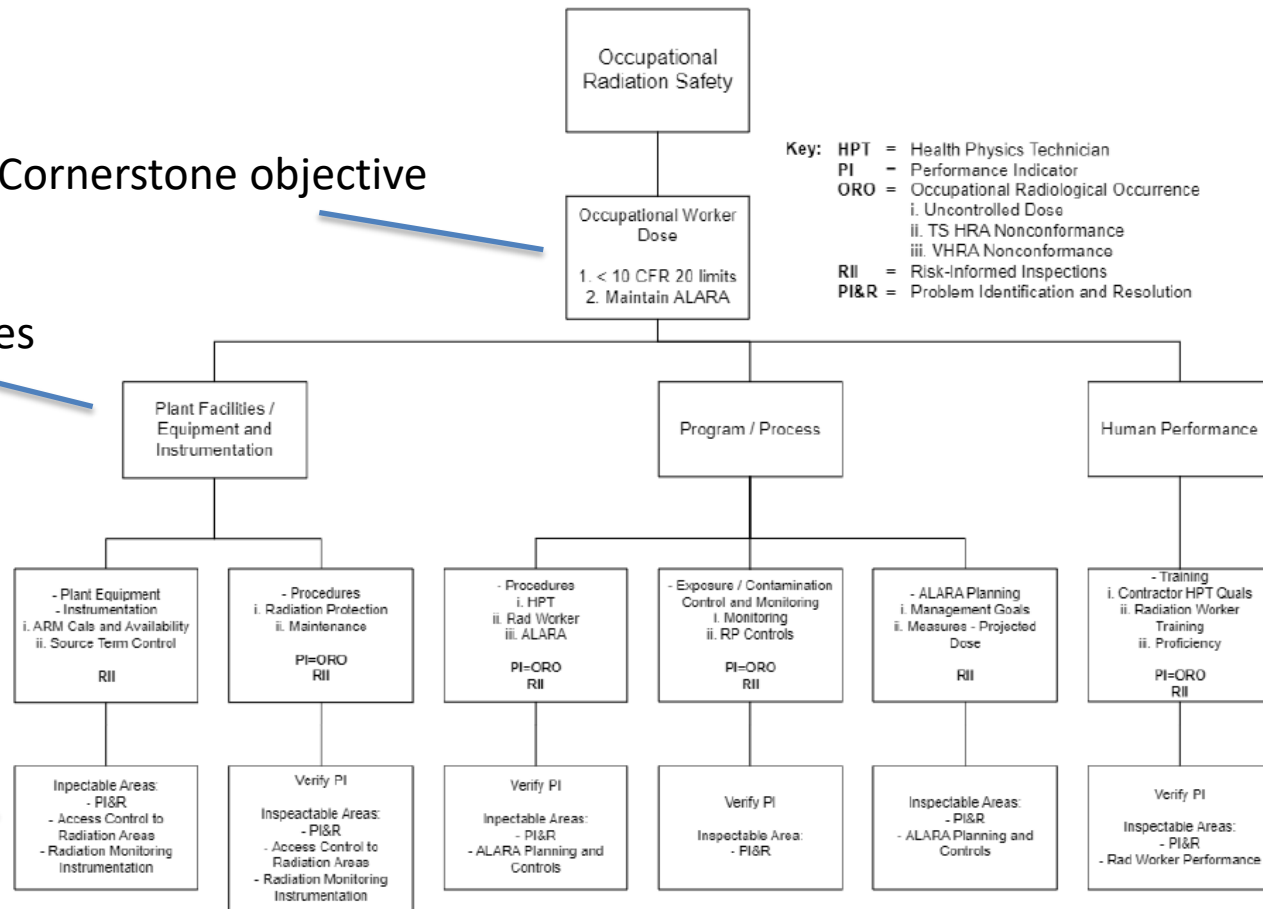
## Exhibit 9: Occupational Radiation Safety Cornerstone

### Cornerstone objective

### Attributes

### Areas to Measure

### Inspectable Areas

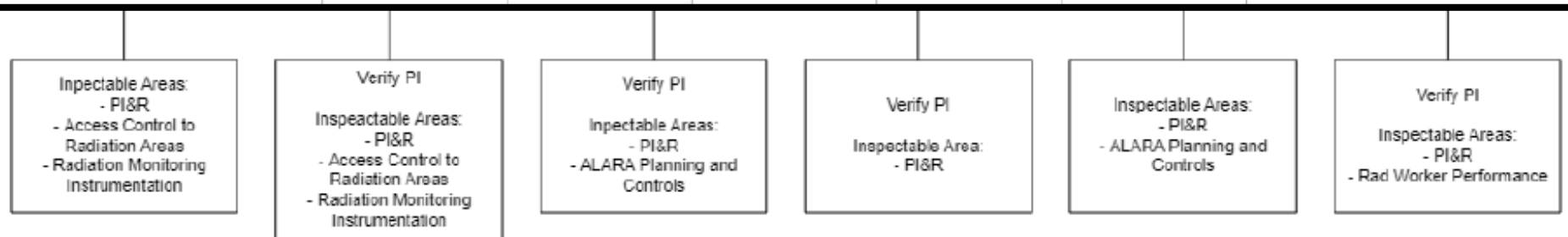
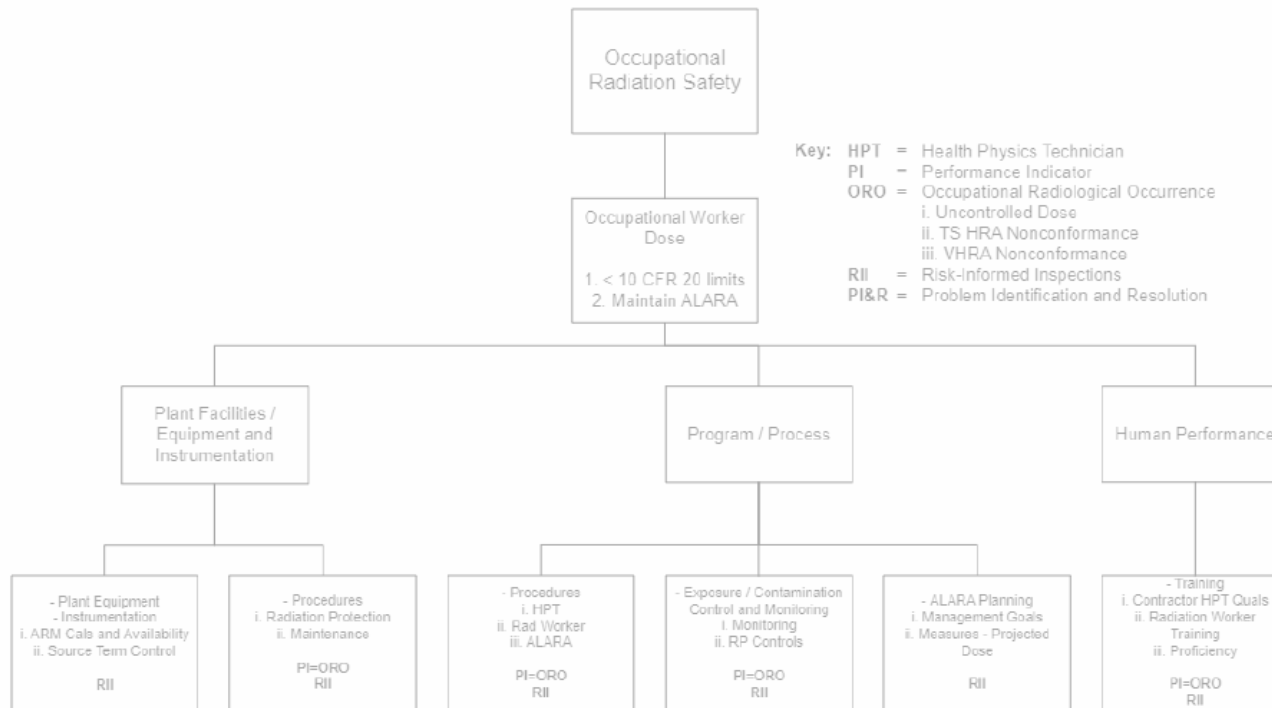


Issue Date: 12/12/24

Ex9-1

0308

## Exhibit 9: Occupational Radiation Safety Cornerstone



13308 Date: 12/12/24

EX-1

0308

# Occupation Radiation Safety

## Objective, Attributes and Areas to Measure

Cornerstone	RADIATION SAFETY – Occupational Radiation Safety
Objective	To ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation.
Attributes	Areas to Measure
Plant Facilities/Equipment and Instrumentation	Plant Equipment Instrumentation, (ARM Cals & Availability, Source Term Control), Procedures (Radiation Protection and Maintenance)
Program & Process	Procedures (HPT, Rad Worker, ALARA); Exposure/Contamination Control and Monitoring (Monitoring and RP Controls), ALARA Planning (Management Goals, Measures - Projected Dose)
Human Performance	Training (Contractor HPT Quals, Radiation Worker Training, Proficiency)

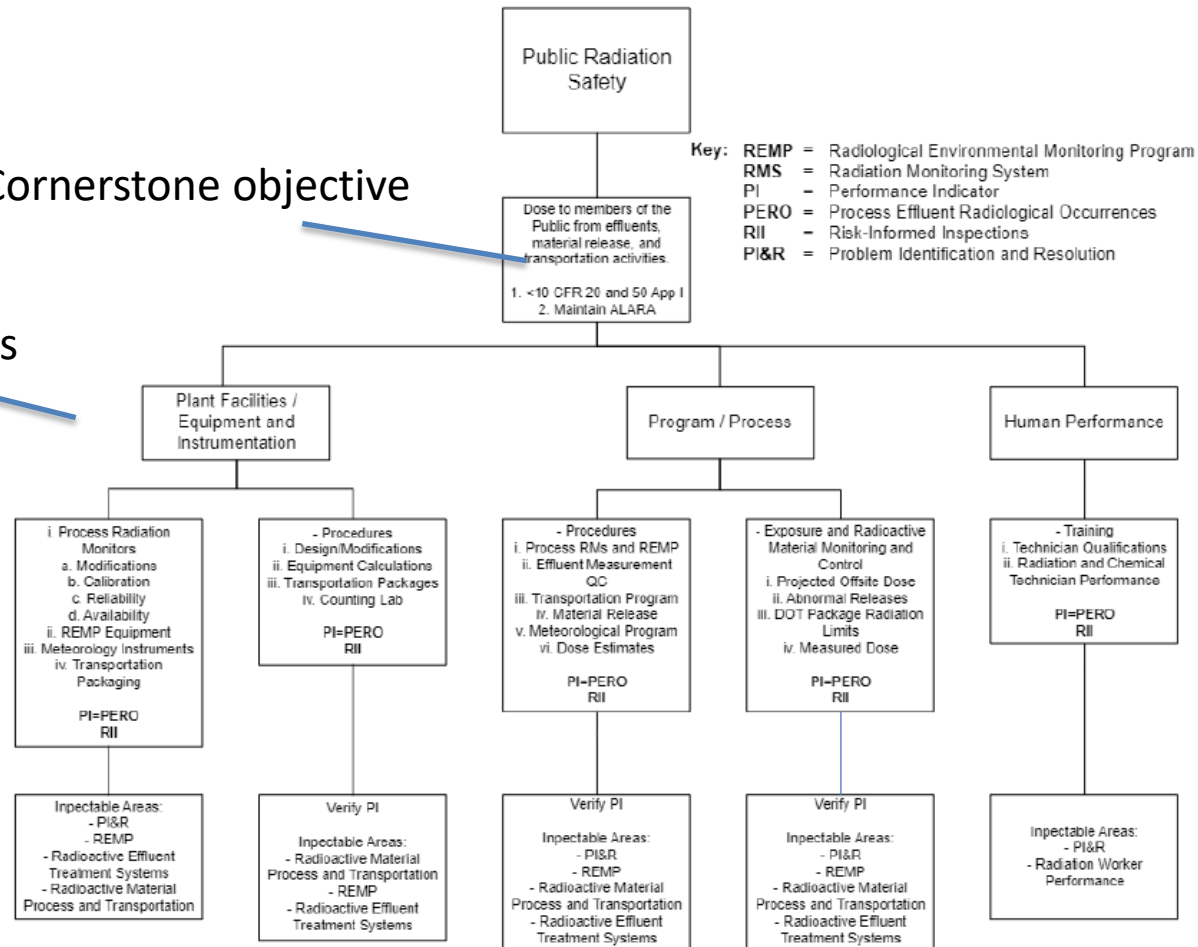
## Exhibit 10: Public Radiation Cornerstone

### Cornerstone objective

### Attributes

### Areas to Measure

### Inspectable Areas



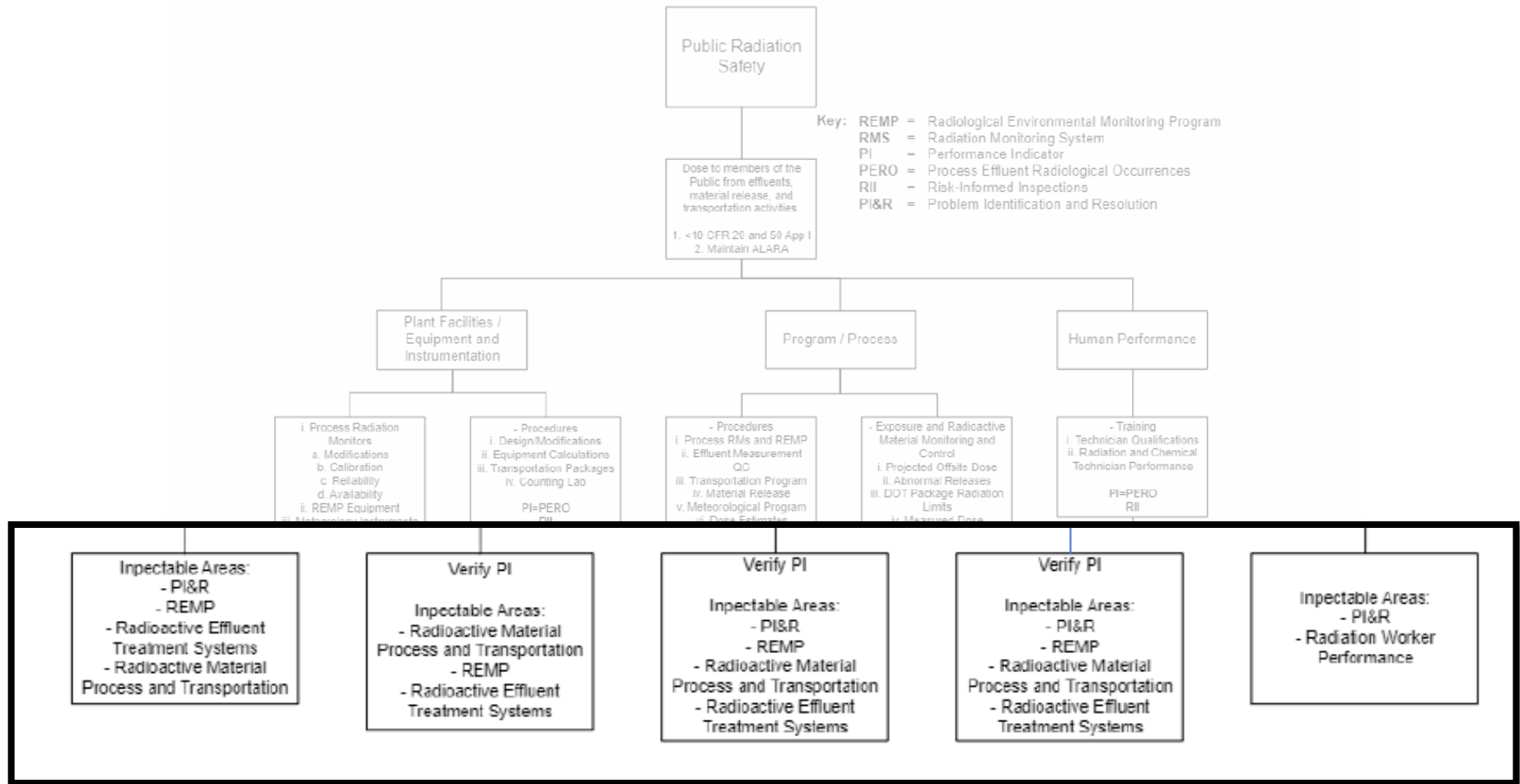
Issue Date: 12/12/24

Ex10-1

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Exhibit 10: Public Radiation Cornerstone



Issue Date: 12/12/24

Ex10-1

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# Public Radiation Safety

## Objective, Attributes and Areas to Measure

Cornerstone	RADIATION SAFETY – Public Radiation Safety
Objective	To ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation.
Attributes	Areas to Measure
Plant Facilities/Equipment and Instrumentation	Process Radiation Monitors (RMS) (Modifications, Calibrations, Reliability, Availability), REMP Equipment Meteorology Instruments, Transportation Packaging, Procedures (Design/Modifications, Equipment Calculations, Transportation Packages, Counting Labs)
Program & Process	Procedures (Process RMs & REMP, Effluent Measurement QC, Transportation Program, Material Release, Meteorological Program, Dose Estimates), Exposure and Radioactivity Material Monitoring and Control (Projected Offsite Dose, Abnormal Release, DOT Package Radiation Limits, Measured Dose)
Human Performance	Training (Technician Qualifications, Radiation & Chemical Technician Performance)

# Public Radiation Safety PI

- **Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual (RETSs/ODCM) (PR01)**—Radiological effluent release occurrences per reactor unit that exceed the values listed below:
  - Liquid Effluents
    - Whole Body—1.5 millirems per quarter (mrem/qtr)
    - Organ—5 mrem/qtr
  - Gaseous Effluents
    - Gamma Dose—5 millirads per quarter (mrad/qtr)
    - Beta Dose—10 mrad/qtr
    - Organ Doses from I-131, iodine-133, tritium, & particulates—7.5 mrem/qtr

Public Radiation Indicator	Thresholds		
	(White) Increased Regulatory Response Band	(Yellow) Required Regulatory Response Band	(Red) Unacceptable Performance Band
RETS/ODCM Radiological Effluents	> 1	> 3	N/A

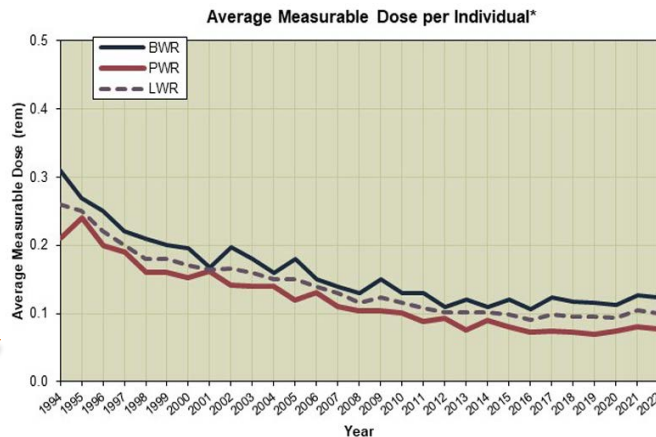
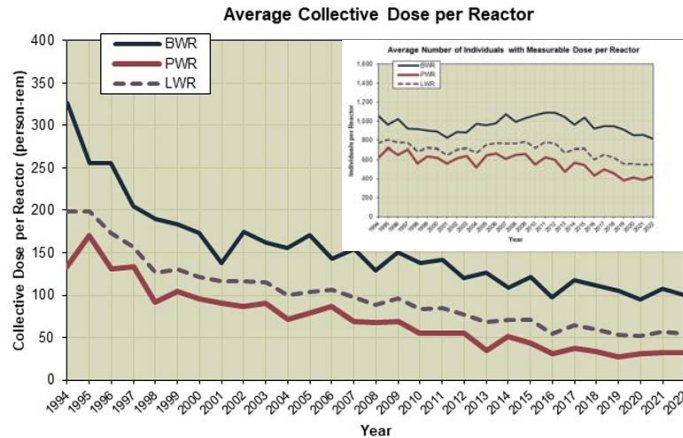
# Occupational Radiation Safety PI

- **Occupational Exposure Control Effectiveness (OR01)**—The PI for this cornerstone is the sum of the following:
  - Technical specification high radiation area occurrences
  - Very high radiation area occurrences
  - Unintended exposure occurrences

Occupational Radiation Safety Indicator	Thresholds		
	(White) Increased Regulatory Response Band	(Yellow) Required Regulatory Response Band	(Red) Unacceptable Performance Band
Occupational Exposure Control Effectiveness	> 2	> 5	N/A

# Regulatory Experience

Occupational and Public Dose



NUREG-0713, Vol 44

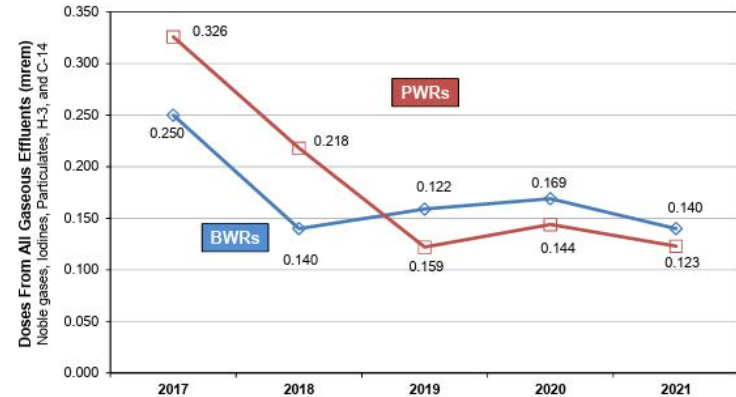


Figure 3-21 Median Maximum Annual Organ Dose, Gaseous Effluents  
5-Year Trend, 2017–2021

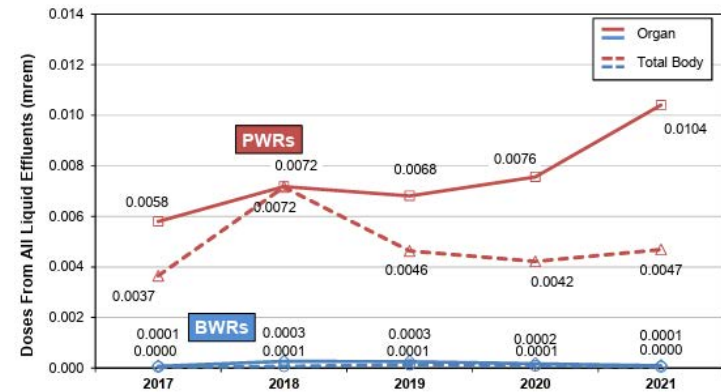


Figure 3-22 Median Maximum Annual Dose, Liquid Effluents  
5-Year Trend, 2017–2021

NUREG/CR-2907, Vol 27

NUREG-0713: <https://www.nrc.gov/docs/ML2430/ML24303A136.pdf>

NUREG/CR-2907: <https://www.nrc.gov/docs/ML2413/ML24134A119.pdf>

# SECY-025-0045



## POLICY ISSUE (Notation Vote)

June 5, 2025

SECY-25-0045

FOR: The Commissioners

FROM: Mirela Gavrilas, PhD  
Executive Director for Operations

SUBJECT: RECOMMENDATIONS FOR REVISING THE REACTOR OVERSIGHT  
PROCESS

### PURPOSE:

This paper seeks Commission approval to make recommended enhancements to the Reactor Oversight Process (ROP) for greater efficiency. It also informs the Commission about planned ROP enhancements that require Commission notification before implementation. The staff identified these enhancements as part of the assessment required by Section 507 of the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024 (ADVANCE Act). These recommendations, if approved, and planned enhancements also respond, in part, to direction in the recently issued Executive Order (EO) 14300, "Ordering the Reform of the Nuclear Regulatory Commission." In addition to the recommendations presented in this paper and its Enclosures, the staff is committed to exploring additional improvements to the oversight program to meet the direction in EO 14300.

### SUMMARY:

This paper provides the results of the staff's assessment of the ROP in response to Section 507 of the ADVANCE Act<sup>1</sup>, including proposed changes requiring Commission approval and planned

CONTACT: Rebecca Sigmon, NRR/DRO  
(301) 415-0895

Philip McKenna, NRR/DRO  
(301) 415-0037

Enclosure 4 transmitted herewith  
contains Official Use Only –  
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transmittal document is decontrolled.

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LIMITED-TO-THE-NRC-UNLESS-THE  
COMMISSION-DETERMINES-OTHERWISE

<sup>1</sup> Although Section 507 of the ADVANCE Act applies to all "nuclear reactor and materials oversight and inspection programs," this paper only discusses those actions that apply to the ROP. A comprehensive discussion of recommendations related to the ROP, as well as other agency oversight and inspection programs, will be included in the Section 507 ADVANCE Act report to Congress.



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# Selected ROP Revision Items

- Revise guidance on inspecting to minimum samples instead of nominal samples. Gives guidance on when it may be appropriate to expect above minimum samples based on risk or licensee performance. SRI or Team Inspection lead makes the decision, Branch Chief (BC) if single person inspection. BC still approves going above max samples (and informs DD). IMC 2515 App A and IMC 0308 Attachment 2 will be issued before 1 July.
- Expand the VLSSIR language in all ROP guidance documents including Inspection Manual Chapter (IMC) 0612 to cover all potential compliance issues verses only licensing basis issues. IMC 0612 and IMC 0612 Appendix B were issued on 5/27/2025 (in effect now).
- Dual path ROP and TE violations are eliminated for Green and SLIV issues. IMC 0612 Appendix B issued on 5/27/2025 (in effect now).
- Entrance and Exit meetings are reduced. Entrance meetings optional (coordinate with licensee) and minimal in time. Exit meetings – Can (and will most likely be) remote meetings. Exit can be Team lead with Licensing Manager, especially if no findings. IMC 2515 revision will be issued before 1 July.



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# For Workshop Discussion

- What performance-related information is available to licensees that can be used by the NRC to risk-inform its inspection effort? Is this information standardized across the industry? If not standardized, is there support for doing so? Would the staff have the ability to document this information in an inspection report to justify modulating inspection effort?
- What approaches that do not involve inspection are available to verify performance indicator information?
- The staff is considering shifting some inspection effort to remote-based inspection if it can conclude that licensee performance can be adequately evaluated using this approach. Given preexisting knowledge of the IP 71124 inspection procedures, what would be the licensees' resource impact of shifting some of the inspection effort to remote?

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# For Workshop Discussion

- Recognizing that radioactive effluents and environmental monitoring are areas of low radiological safety significance, but important areas of the NRC's regulatory framework, what changes could the staff consider to right-size oversight in this area?
- Radiation protection programs are best assessed during periods of high radiological risk significance; however, at these times, licensee personnel resources are most strained. What are some approaches that the NRC and licensees could adopt to ensure risk-informed, performance-based inspection can continue during these periods, while minimizing impact on licensee resources.

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“NRC concluded that overall performance at your facility preserved public health and safety”

Thank you!





# Break

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# Public Comment

# Contacts

David Garmon

- [david.garmon@nrc.gov](mailto:david.garmon@nrc.gov)
- 301-415-3512

Bill Rautzen

- [william.rautzen@nrc.gov](mailto:william.rautzen@nrc.gov)
- 301-415-7206

## How did we do?

### Public Meeting Schedule: Meeting Details

[ [New Search](#) ]

Meeting info

#### Purpose

Executive Order (EO) 14300 Section 5(b) directs the NRC to reconsider its use of the linear no threshold (LNT) model and its use of the radiation principle that aims to keep radiation exposures as low as is reasonably achievable (ALARA). The EO also directs the NRC to consider the use of determinate radiation dose limits. This EO provides the NRC with a great opportunity to rethink its radiation protection regulatory framework to ensure the NRC is supporting the whole-of-government effort to safely enable the nation's use of nuclear power. We are incorporating experience gained since we established this framework in the early 1990's. The NRC is holding this public meeting to obtain stakeholder perspectives to support near-term development of recommendations, that may include changes to our guidance and regulations. Please see the Comment section for important instructions for participants and proposals for presentations. Please note - Presentation slots have been filled.

#### Meeting Feedback

#### Meeting Dates and Times

07/16/25  
1:00PM - 5:30PM ET

#### Webinar

Webinar Link: <https://events.gcc.teams.microsoft.com/event/d9bb152c-e2ae-49b2-a0f4-3303c1b25b1b@e8d01475-c3b5-436a-a065-5def4c64f52e> [EXIT](#)  
Webinar Meeting Number: 230 432 936 713 6  
Webinar Password: Dx2CG7RV

#### Contact

David Garmon  
(301) 415-3512

Ed Miller  
(301) 415-2481

### Meeting Feedback

Meeting Feedback Form [EXIT](#)

<https://www.nrc.gov/pmns/mtg?do=details&Code=20250885>