Public Meeting: Proposed Revision of the ROP Baseline Inspection Program

August 20, 2025

Opening Remarks

Philip McKenna
Acting Director
Division of Reactor Oversight (DRO)

Recap of Ongoing Actions from the ADVANCE Act Section 507

Purpose, Outcome, Plan

Purpose of the Presentation

- To discuss proposed revisions to the ROP Baseline Inspection Program.

Desired Outcome

- Communicate proposed revisions and implementation timeline to industry and members of the public.

Agenda

1. Scope of Review and Background
2. Recommended Changes
3. Resource Impact & FTE Savings
4. Timeline & Next Steps
5. Q&A / Discussion

Scope of Review and Background

These changes represent an evolutionary step, building on nearly 25 years of experience with the Reactor Oversight Process (ROP).

The aim is to eliminate redundant, low value inspection activities, allowing the ROP to more efficiently reflect plant operational performance.

These changes will need Commission approval before implementation can occur (targeted for **January 1, 2026)**

The proposed revisions to the ROP Baseline Inspection Program were informed by past ROP Enhancement work, ADVANCE Act Section 507 work, and survey responses and inputs from ~200 inspectors and staff across the agency

ROP Baseline Inspection Procedure Changes

Summary of Resident Inspector ROP Baseline Inspection Program Proposed Changes

IP Action	IP
IP samples/hours reduced (by 10-50% depending on the IP)	71111.04, Equipment Alignment 71111.05, Fire Protection 71111.08, Inservice Inspection Activities 71111.11, Licensed Operator Requalification Program and Licensed Operator Performance 71111.13, Maintenance Risk Assessments and Emergent Work Control 71111.24, Testing and Maintenance of Equipment Important to Risk 71153, Followup of Events and Notices of Enforcement Discretion
IPs Eliminated	71111.06, Flood Protection Measures (attributes shifted to .01 and .04) 71111.07, Heat Exchanger/Sink Performance (attributes shifted to .04) 71111.12, Maintenance Effectiveness (requirements shifted to .24) 71111.18, Plant Modifications (attributes shifted to .04, .11, engineering inspection) 71151, Performance Indicator Verification (reduced verification shifted to PI&R, or other IPs)
IPs Unchanged (sample size already shifted to minimum samples)	71111.01, Adverse Weather Protection 71111.15, Operability Determinations and Functionality Assessments 71111.20, Refueling and Other Outage Activities

ROP Baseline Inspection Procedure Changes

IP 71111.01, Adverse Weather

- No change to requirements or guidance based upon operating experience and potential risk significance for several sites. Will add flood protection attributes to procedure.
- Samples will remain at one for severe weather and one for seasonal readiness

IP 71111.04, Equipment Alignment

- No substantial change to requirements or guidance due to risk significance. Will add flood protection and heat exchanger attributes to procedure.
- Sample range reduced from 10-14 to 8-12, and one complete walkdown.

IP 71111.05, Fire Protection

- No substantial change to requirements or guidance due to potential risk significance.
- Will revise inspection guidance to recommend that where possible, perform this inspection with the equipment walkdown procedure IP 7111.04 which is already a practice performed by some inspectors.
- Sample range reduced from 16-24 to 12-20
- Fire brigade inspection minimum samples reduced to one. Option allowed to conduct two, if needed, to assess brigade performance.

IP 71111.06, Flood Protection Measures

- Sample attributes absorbed into IP 71111.01 and IP 71111.04
- IP sunset- Bases – Redundant activity to the walkdown procedures IP 71111.01 and IP 71111.04.

IP 71111.07, Heat Exchanger/Sink Performance

- Sample attributes absorbed into 71111.04 and 71111.24.
- IP sunset- Basis – Industry Operating Experience indicates licensee heat exchanger/sink programs are mature/inspector feedback.

ROP Baseline Inspection Procedure Changes

IP 71111.08, Inservice Inspection

- Minor enhancement only
- Boric Acid Corrosion review reduced from 10 to 4 hours
- Remainder of ISI activities maintained due to high risk

IP 71111.12, Maintenance Effectiveness

- Sample attributes and requirements will be absorbed into IP 71111.24.
- IP sunset- Bases – Redundant activity to IP 71111.24.

IP 71111.13, Maintenance Risk Assessments and Emergent Work Control

- Slight reduction in sample size – to reflect industry experience regarding risk management activities.
- Inspection activity added- PRA configuration control as an inspection element.
- Bases – The sample addition was the original plan based upon recommendations from the PRA Configuration Control Working Group.

IP 71111.15, Operability Evaluations

- No change to requirements or guidance based upon operating experience and inspector feedback

P 71111.18, Plant Modifications

- Sample attributes absorbed into IP 71111.04, IP 71111.11 and new engineering inspection IP
- IP sunset- Bases – Redundant activities contained in IP 71111.04, 71111.11 and engineering inspection program

ROP Baseline Inspection Procedure Changes

IP 71111.20, Refueling and Other Outage Activities

- No substantial change to requirements or guidance.

IP 71111.24, Testing and Maintenance of Equipment Important to Risk

- Inspection guidance will be enhanced to include attributes from IP 71111.12.

IP 711151, Performance Indicators

- Reduced verification absorbed into proposed IP 71152 PI&R, plant status
- IP sunset- Bases – No substantial issues identified since commencement of the ROP/inspector feedback

IP 71153, Followup of Events and Notices of Enforcement Discretion

- Reduced level of effort based on clarifications on when to shift from using IP 71153 to another baseline IP to inspect the corrective actions as a result of the event and clarification that if an event has already been inspected under a different IP the event should not be re-inspected using IP 71153

Engineering Inspection Changes

Option 1, Shift to Annual Cycle

- **2** Engineering inspections per year**,** each inspection team has **2 inspectors.**
- **Inspection 1- Engineering Work Product**
- **Inspection 2- Risk Significant Components**
- **Overall reduction is 50%** (280 hrs/yr to 140 hrs/yr)

Option 2, **Maintain** the current **4-year cycle** for CETI and FEIs

- **Reduce CETI team** size to **5 inspectors** by:
  - Removing 50.59 screenings from CETI scope.
  - Shifting those samples to resident inspectors.
- **Reduce FEIs to 2 per cycle (would change if include cyber as FEI)**
- Overall reduction with shift to min samples is 41% (280 hrs/yr to 165 hrs/yr)

Option 3, Shift to Annual Cycle, but retain format that allows for in-depth reviews

- **1 two-week** Engineering inspection per year**,** with the inspection having on average **2.5 inspectors**
- Samples will be flexible based on licensee current performance
- Allows for detailed inspection of components if necessary
- **Overall reduction is 37%** (280 hrs/yr to 175 hrs/yr)

Possible PI&R Inspection Changes

Option 1, Move IP 71152B to Appendix C

- Move sample from 71152 Team Inspection as possible samples for the annual 71152 samples:
  - Possible sample will include licensee audits and self assessments, licensee use of operating experience, 5-year review, SCWE, and open CAPRs
- Overall assessment of program using team inspection inputs
- Development of objective criteria for implementation of team inspection
- **Estimated resource savings (~45%)** (219 hours to 120 hours)

Sample Requirements		Minimum Baseline Completion Sample Requirements		Budgeted Range	
Sample Type	Section	Frequency*	Sample Size	Samples	Hours
Baseline PI&R Review	03.01	NA	NA	NA	10-15 percent*
Semiannual Trend Review	03.02	Semiannual	2	2	20 + 4 hours
Annual Follow-up of Selected Issues	03.03	Annual	6	6 to 7	97 + 10 hours (1 Unit) 100 + 10 hours (2 Units) 103 + 10 hours (3 Units)
Focused inspection: Licensee Audits and Self-Assessments		Biennial	1	1	
Focused inspection: Licensee use of OpE		Biennial	1	1	
Focused inspection: 5-year review		Biennial	1	1	
Focused Inspection: SCWE		Biennial	1	1	
Focused inspection: Open CAPR(s)		As required	1	1	

Possible PI&R Inspection Changes

Option 2, Shift PI&R to a 4-year inspection cycle

- Maintain a **4-person team** including support from resident inspector
- Introduce a **"small-scale" PI&R** inspection that can be upsized based on performance
- Deep dive into aspects of the licensee's CAP program
- Inspection can be performed by any fully qualified inspector (preferably a resident inspector during their objectivity visit for KM purposes)
- **Estimated resource savings (~41%)**

Sample Requirements		Minimum Baseline Completion Sample Requirements		Budgeted Range	
Sample Type	Section	Frequency*	Sample Size	Samples	Hours
Baseline PI&R Review	03.01	NA	NA	NA	10-15 percent*
Semiannual Trend Review	03.02	Semiannual	2	2	16 + 4 hours
Annual Follow-up of Selected Issues	03.03	Annual	3	3 to 7	51 + 10 hours (1 Unit) 54 + 10 hours (2 Units) 57 + 10 hours (3 Units)
Focused inspection: Small-scale inspection		Quadrennial	1	1	40 + 5 hours
Quadrennial Inspection Team	03.04	Quadrennial	1	1	200 + 38 hours

Possible PI&R Inspection Changes

Option 3, Shift PI&R team inspection to Triennial

- Team inspection performed on triennial frequency (Initial proposal that was made in 2019)
- Increase annual follow-up samples
- No longer distinguish between 1-, 2-, and 3-unit sites
- **Estimated resource savings (~17%)**

Sample Requirements		Minimum Baseline Completion Sample Requirements		Budgeted Range	
Sample Type	Section	Frequency*	Sample Size	Samples	Hours
Baseline PI&R Review	03.01	NA	NA	NA	10-15 percent*
Semiannual Trend Review	03.02	Semiannual	2	2	20 + 4 hours
Annual Follow-up of Selected Issues	03.03	Annual	6	6 to 10	96 + 24 hours
Triennial Inspection Team	03.04	Triennial	1	1	210 + 38 hours

Licensed Operator Inspection Changes

Change 1

Reduce 96-hour range for .11B to match actual avg of 80 hrs

Change 2: For .11Q observations performed by residents: eliminate control room samples and reduce number of training/operating test samples by 50%

- Observations of operator performance in control room happen regardless of this IP; add an option for observing significant evolutions "as available"
- Reduce training/exam observations to semi-annual and eliminate need to watch classroom training

Change 3: Keep .11B team at 2, but **pair** one **resident inspector** with one regional examiner

- OL examiner inspects simulator performance, license conditions, written exam and operating test quality
- Resident inspector performs aspects of the 11B inspection not designated for OL examiner qualified inspector
- OL Examiner: 60 +/- 8 hrs, Resident Inspector: 20 +/-4 hrs

Change 4: Reduce scope of the .11B inspection of the requalification program

- Reductions in observations and quality reviews for simulator scenarios and JPMs, written examination questions and inspections of medical records and other license conditions and simulator performance

NRR/DRA – Radiation Protection Changes

Recommendation

- Priorities
  - Revise IPs to better risk-inform program
  - Incentivize adequate licensee response activities through the application of select low-level data
  - Reduce overall regulatory burden on licensees
- Reduce from 7 procedures to 4 (Outage Procedure , 2x On-site procedures and 1x Remote)
- Triennial cycle (assumed 1 RFO per 12 months for hours calculation; however, frequency will be similar to IP 71111.20)
- Some inspection requirements can be modulated based on licensee performance as determined by data/information sets defined in the IP. IPs will provide Region with decisionmaking tools to ensure consistent outcome in evaluating and applying “low-level data”
- Outage procedure
  - Highest radiological risk period at plant

NSIR – Security Changes

Recommendation: Revise Baseline Security Inspection Program

- Revise IPs to refocus from verifications of compliance with individual regulatory requirements to verifications of licensee performance and compliance with the general performance objectives of 10 CFR 73.55
- Replace existing 11 IPs with 7 focused inspections grouped by common inspection objectives.
  - Security Performance and Problem Identification and Resolution
  - Access Authorization and Fitness for Duty
  - Security Equipment and Training
  - Protective Strategy and Target Sets
  - Cybersecurity
  - Material Control and Accounting
  - Force-on-Force

NSIR – Security Changes

Recommendation: Revise Baseline Security Inspection Program

- Security inspections will be triennial, except for Security Performance and Problem Identification and Resolution which will remain annual.
- Resident inspectors will be utilized as limited inspection team members to complete inspection requirements that do not require significant additional training. Examples include:
  - Review of licensee Target Sets and exercise observation during the protective strategy inspection.
  - Verification of testing and maintenance of licensee security power supplies during the security equipment inspection.
- Cybersecurity and Material Control and Accounting will remain within the security suite of inspections but will continue to be performed by regional engineering or resident inspection staff.

NSIR – Emergency Preparedness Changes

IP 71114.06 (NRC Resident EP evaluations)

- **Added more sample options**, this has been a recurring issue.
- **Frequency change** from annual to biennial and scheduled for the off-year, i.e., the year between EP exercises.

IP 71114.02, 71114.03, 71114.04, 71114.05

- **Schedule** for the off-year, i.e., the year between EP exercises.
- **All changes could follow the remote inspection guidance in IM 2515** (note that 71114.08 is already remote).

IP 71114.04

- **Frequency change** from annual to biennial and scheduled for the off-year, i.e., the year between EP exercises.

PI&R

- **Remove EP from PI&R** as this is being done already during the EP baseline inspections and is redundant.

EP SDP

- **Revise** to focus GTG inspection findings on only those planning standards with direct public impact.
- **Revise** to enhance the section on dose assessment/radiation instrument issues based on experience and feedback.

NSIR – **GOAL** of Emergency Preparedness Changes

To have 1 year with an EP exercise

- Will include detail about team expectations and qualifications as well as direction for how to do this inspection better.
- Expected to save about 10-20 % of time, particularly with inexperienced inspectors.

To have baseline inspections during the off-year

- Everything but the exercise, can be done remotely.
- Expected to save a significant amount of time with not needing to travel.
- Regions are very inconsistent in this area, but it is expected that this will result in significant savings (time and FTE).

To have a risk-informed EP SDP

- The enhancements to the (b)(9), dose assessment, is expected to save ~10% as well if rad instruments or dose assessment issues occur.
- Currently these take quite a bit of time and FTE.

Overview of Reductions and Impacts

Possible Activities Transferred to Resident Inspectors (to account for the decrease in RI baseline inspection hours)

2 Resident Inspectors maintained per site

- Resident inspector baseline reduction time will be filled with team inspections and/or other program inspection shifts

Engineering

- Possible participation in annual Engineering inspection

Licensed Operator Requalification

- Possibly pair with an OL examiner to complete portions of biannual licensed operator requal inspection

NSIR-Security

- Resident inspectors can participate as limited team members on security inspections to perform inspections that require limited additional training
  - Protective Strategy and Target Set Review: ~10 hours for exercise observation and target set review
  - Security Equipment: ~2 hours for security backup power if sample is selected by the team
- Other security suite inspections, MC&A and cybersecurity, can be performed by resident inspectors after adequate training

NSIR-EP

- Resident inspectors can already participate as EP exercise evaluators for IP 71114.01 and IP 71114.07 (HAB). No additional activities proposed to be transferred to the resident inspectors.

NMSS – ISFSI

- Assist on ISFSI inspection

Possible Overall Impact

NRR	**New Min Hours**	Min Hours	Nom Hours	**New Max Hours**	Max Hours
Resident Inspection hours*	**764**	875	1023	**926**	1150
Engineering Hours (preferred option)	**175**	238	280	**161**	322
RP Hours	**71**	101	116	**78**	130
PIR team inspection (preferred option)	**0**	106	125	**0**	144
ISI inspectors	**33**	35	36	**42**	51
Ops examiners	**32.5**	40.5	48	**47.5**	55.5
Total	**1076**	1396	1628	**1231.5**	1852.5

NSIR	**New Min Hours**	Min Hours	Nom Hours	**New Max Hours**	Max Hours
Physical and Cyber Security	**155**	256.5	287.7	**180.3**	321.5
EP Hours	**73**	105.5	144	**122**	191.5
Total	**228**	362	432	**302**	513

- **NRR reductions 34%**
- **NSIR reductions 47%**
- **Overall reductions 36%**

- **NRR Calculation Details**
  - **Baseline inspection hours per site** drop from **1,628 (current nominal) to 1,076 (updated min)** (−34%)
  - **Agency-wide resource savings = 29 FTE**
  - Nominal inspection hours per site in January 2025 = 1,628 hours
  - New minimum hours = 1,076 hours
  - (1,628 – 1,076)/1,628= 36%
  - 1500 hours/FTE includes
    - 1000 hours of direct inspection
    - 500 hours of indirect inspection
  - (1,628hours – 1,076hours)*53 sites/1000 hrs/FTE = 29 FTE

*Resident inspection hours do not include Plant Status, and was based on a dual unit site, BWR

Timeline and Next Steps

Date	Milestone
Aug 20	**Public Meeting** to discuss Options for the Revised ROP Baseline Inspection Program
Aug 25	EDO Alignment Meeting
Aug 26	Draft SECY to DRO Director
Sept 18	ROP Bimonthly **Public Meeting**
Sept 19	Regional Administrators and Office Directors complete concurrence on draft SECY
September thru December	Development, Regional Review, and Issuance of Revised Inspection Manual Chapters (IMCs) and Inspection Procedures (IPs)
Oct 4	SECY to OEDO
Oct 15	SECY to the Commission
December	Inspector training at December Inspector Counterpart Meetings
Jan 1, 2026	Issued Revised IPs for the Baseline Inspection Program go into effect (pending Commission approval of Revised ROP)

Questions & Answers
Discussion