

Summary of Inspection Program Changes (Samples and Hours)

This enclosure presents the current Reactor Oversight Process (ROP) baseline inspection program sample sizes and direct inspection hours for each individual inspection procedure (IP) with additional data showing annualized resource estimates (rounded to the closest hour). It also outlines the NRC staff's proposed changes to sample sizes and inspection hours by IP, along with a comparison of the current and proposed direct inspection hours resulting from the proposed ROP adjustments.

In the data provided below, all values are based on a 2-unit pressurized water reactor (PWR) site. For IPs conducted on a refueling outage basis, the staff used a factor of 1.5 to determine annual hours.

CURRENT ROP BASELINE INSPECTION PROGRAM (January 1, 2025):

Baseline Reactor Safety Inspection Procedures (71111 Series)

Procedure Number	Freq	Title	Min Samples	Min Hours (Annualized)	Nominal Samples	Nom Hours	Nom Hours (Annualized)
71111.01	A	Adverse Weather Protection	2	10	3	17	17
71111.04	A	Equipment Alignment	11	52	13	60	60
71111.05	A	Fire Protection	18	45	22	50	50
71111.06	A	Flood Protection Measures	1	6	2	12	12
71111.07	A	Heat Exchanger	1	6	1	7	7
71111.08	R	Inservice Inspection Activities (PWR)	2	47	2	86	57
71111.11B	B	Licensed Op Regual & Perform (Biennial)	1	41	1	96	48
71111.11Q	A	Licensed Op Regual & Perform (Quarterly)	8	33	8	34	34
71111.12	A	Maintenance Effectiveness	8	94	9	108	108
71111.13	A	Maintenance Risk Assessments & Emergent Work Control	12	60	17	85	85
71111.15	A	Oper Determinations/Functionality	19	107	22	122	122
71111.18	A	Plant Modifications	2	16	4	32	32
71111.20	R	Refueling and Other Outage Activities	1	41	1	77	51
71111.21M	Quad	Comprehensive Engineering Team Inspection	15	104	28	490	122
71111.21N.03	Quad	Commercial Grade Dedication	9	44	12	210	52
71111.21N.04	Quad	Age-Related Degradation	8	44	12	210	52
71111.21N.05	Quad	Fire Protection Team Inspections	5	44	6	210	52
71111.24	A	Testing and Maintenance of Equipment Important to Risk	34	171	41	184	184
ANNUALIZED TOTAL							1145

Baseline Emergency Preparedness Inspection Procedures (71114 Series)

Procedure Number	Freq	Title	Minimum Samples	Minimum Hours (Annualized)	Nominal Samples	Nominal Hours	Nominal Hours (Annualized)
71114.01	B	Exercise Evaluation**	1	27	1	69	36
71114.02	B	Alert and Notification System Testing**	1	2	1	9	5
71114.03	B	Emergency Response Organizational Staffing/Augmentation**	1	3	1	13	7
71114.04	A	Emergency Act Level & Emergency Plan Changes**	1	24	1	30	30
71114.05	B	Maintenance of EP*	1	4.5	1	37	19
71114.06	A	Drill Evaluation**	1	9	3	19	10
71114.07	B	Exercise Evaluation – Hostile Action Event ¹ **	1	27	1	60	30
71114.08	B	Exercise Evaluation - Scenario Review	1	6	1	14	7
ANNUALIZED TOTAL							144

*This includes Performance Indicator (PI) verification hours

**This includes Problem identification and Resolution (PI&R) hours

Baseline Radiation Protection Inspection Procedures (71124 Series)

Procedure Number	Freq	Title	Min Samples	Min Hours (Annualized)	Nominal Samples	Nominal Hours	Nominal Hours (Annualized)
71124.01	A	Rad Haz Assess Exposure Controls	10	38	12	42	42
71124.03	B	Airborne Radioactivity	4	6	4	16	8
71124.04	B	Occupational Dose Assessment	4	8	6	20	10
71124.05	B	Radiation Monitoring Instrumentation	17	17	21	38	19
71124.06	T	Radioactive Gaseous and Liquid Effluent Treatment	9	8	13	29	10
71124.07	T	Radiological Environmental Monitoring Program	3	8	3	29	10
71124.08	B	Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation	8	15	11	34	17
ANNUALIZED TOTAL							115

¹ IP 71114.07, Exercise Evaluation – Hostile Action, when performed, is substituted for IP 71114.01, Exercise Evaluation. For calculation purposes, only one occurrence is included in the totals.

Baseline Security Inspection Procedures (71130 Series)

Procedure Number	Freq	Title	Minimum Samples	Minimum Hours (Annualized)	Nominal Samples	Nominal Hours	Nominal Hours (Annualized)
71130.01	T	Access Authorization	1	6	1	24	8
71130.02	A	Access Control	1	20	1	28	28
71130.03	T	Contingency Response – Force-on-Force Testing	1	92	1	393 ²	131
71130.04	B	Equipment Performance, Testing, & Maintenance	1	15	1	39	18
71130.05	T	Protective Strategy Evaluation and Performance Evaluation Program	2	23	2	90	30
71130.07	B	Security Training	1	10	1	27	14
71130.08	T	Fitness-For-Duty Program	1	5	1	24	8
71130.09	A	Security Plan Changes	1	6	1	7	7
71130.10	B	Cybersecurity	1	31	1	70	35
71130.11	T	Material Control and Accounting	1	5	1	15	5
71130.14	T	Review of Power Reactor Target Sets	1	3	1	9	3
ANNUALIZED TOTAL							287

Baseline Inspection Procedures that Cover Multiple Cornerstones

Procedure Number	Freq	Title	Minimum Samples	Minimum Hours (Annualized)	Nominal Samples	Nominal Procedure Hours	Nominal Hours (Annualized)
71151	A	Performance Indicator Verification	27	25	27	28	28
71152A	A	PI & R Annual	4	64	6	74	74
711152B	B	PI & R Biennial Team Inspection	1	212	1	250	125
71152S	S	PI & R Semi Annual	2	16	2	20	20
71153	A	Follow up of Events and Notices of Enforcement Discretion	3	80	6	80	80
ANNUALIZED TOTAL							327

² The resource estimate for IP 71130.03 is reflective of the IP that was in place in CY2025. In CY2026, a revised IP will be implemented that has a resource estimate of 275 hours, per the Commission direction in SRM-COMSECY-19-0006.

PROPOSED ROP BASELINE INSPECTION PROGRAM

The NRC staff performed a comprehensive review of the ROP baseline inspection program during the re-baselining effort to strengthen the effectiveness and efficiency of the program. Proposed samples and hours for the resultant program are below:

Proposed Baseline Reactor Safety Inspection Procedures (71111 Series)

Procedure Number	Freq	Title	Min Samples	Minimum Hours	New Min Hours (Annualized)
71111.01	A	Adverse Weather Protection	2	10	10
71111.04	A	Equipment Alignment	9	72	72
71111.05	A	Fire Protection	13	30	30
71111.08	R	Inservice Inspection Activities	2	66	44
71111.11Q	A	Licensed Operator Requalification Program and Licensed Operator Performance (Quarterly)	4	9	9
71111.11B	B	Licensed Operator Requalification Program and Licensed Operator Performance (Biennial)	1	64	32
71111.13	A	Maintenance Risk Assessments & Emergent Work Control	12	75	75
71111.15	A	Oper Determinations/Functionality ³	19	107	107
71111.20	R	Refueling and Other Outage Activities	1	62	62
71111.24	A	Testing and Maintenance of Equipment Important to Risk and Maintenance Effectiveness	34	181	181
New	A	Engineering IP	TBD	175	175
ANNUALIZED TOTAL					797

Proposed Baseline Emergency Preparedness Inspection Procedures (71114 Series)

Procedure Number	Freq	Title	Min Samples	Minimum Procedure Hours	New Min Hours (Annualized)
71114.01	B	Exercise Evaluation	1	80	40
71114.02	B	Alert and Notification System Evaluation	1	4	2
71114.03	B	Emergency Response Organization Staffing and Augmentation System	1	4	2
71114.04	B	Emergency Action Level and Emergency Plan Changes	1	12	6
71114.05	B	Maintenance of Emergency Preparedness	1	9	5
71114.06	B	NRC Resident – Evaluation of Emergency Preparedness Program	3	5	3
71114.07	B	Exercise Evaluation – Scenario Review	1	10	5
ANNUALIZED TOTAL					63

Proposed Baseline Radiation Protection Inspection Procedures (71125⁴ Series)

Procedure Number	Freq	Title	Min Samples	Minimum Procedure Hours	New Min Hours (Annualized)
71125.01	R	Radiation Safety Refueling Outage	TBD	57	38
71125.02	T	Radiation Protection – Remote Inspection	TBD	33	11
71125.03	T	Occupational Radiation Safety Onsite Inspection	TBD	33	11
71125.04	T	Public Radiation Safety Onsite Inspection	TBD	33	11
ANNUALIZED TOTAL					71

Proposed Baseline Security Inspection Procedures (71130 Series)⁵

Procedure Number	Freq	Title	Min Samples	Minimum Procedure Hours	New Min Hours (Annualized)
71130.10	T	Cybersecurity	3	63	21
71130.15	A	Security Operations (Resident Inspectors)	6	16	16
71130.16	A	Security Performance (Regional Inspectors)	4	64	64
71130.17	T	Force-on-Force Exercise	1	144	48
ANNUALIZED TOTAL					149

Proposed Baseline Inspection Procedures that Cover Multiple Cornerstones

Procedure Number	Freq	Title	Min Samples	Minimum Procedure Hours	New Min Hours (Annualized)
71152A	A	PI & R Annual	7	90	90
71152S	S	PI & R Semi Annual	2	20	20
71153	A	Follow up of Events and Notices of Enforcement Discretion	5	55	55
ANNUALIZED TOTAL					165

⁴ Because the changes to the radiation protection program are so significant, the staff is proposing a new procedure series (IP 71125) that will replace the current IP 71124 series.

⁵ Resource estimates for security are based on those presented in a companion paper outlining all changes for the ROP's baseline security inspection program.

CHANGES IN INSPECTION RESOURCES

The following table provides a comparison of the total annualized resources for the current and the proposed programs with the corresponding percentage showing the total change in resource usage.

Procedure Series	Current Program Annualized Hours	Proposed Program Annualized Hours	% Change Resource Usage
Reactor Safety Inspection Procedures (IP 71111 Series)	1145	797	-30%
Emergency Preparedness Inspection Procedures (IP 71114 Series)	144	63	-56%
Radiation Protection Inspection Procedures (IP 71124 Series)	115	71	-38%
Security Procedures Inspection (IP 71130 Series) ⁶	287	149	-48%
PI Review, PI&R, Event Follow-Up Inspection Procedures	327	165	-49%
TOTAL	2018	1235	-38%

In presenting the above values to the Commission, the staff highlights the following key drivers and influential factors:

1. **Assumptions for Resource Estimates:** For all inspection procedures, the current ROP baseline inspection program's annualized hours are based on nominal sample sizes and resource levels. In contrast, the proposed ROP baseline inspection program's estimates are based on minimum sample sizes and minimum resources. This approach aligns with the NRC's response to Congress in the ADVANCE Act Section 507 report ([ML25077A245](#)), which outlined interim actions taken during the comprehensive review of the ROP. The proposals in this paper would make this approach permanent. Upon Commission approval, the staff will revise the NRC Inspection Manual accordingly to reflect this expectation.
2. **Reactor Safety Inspection Procedures:** The primary driver of resource changes in reactor safety inspections is the proposed restructuring of the engineering inspection program. The current structure includes a comprehensive engineering team inspection and three focused engineering inspections, totaling 1,260 hours per quadrennial cycle (or 315 hours annually). The proposed approach consolidates these inspections into a single engineering inspection procedure requiring 175 hours annually, a 45 percent reduction in resources. Additional efficiency gains are achieved by discontinuing or consolidating other inspection procedures, without reducing the NRC's oversight of any specific inspectable area.

⁶ Resource estimates for security are based on those presented in a companion paper outlining all changes for the ROP's baseline security inspection program.

3. **Emergency Preparedness Inspection Procedures:** The primary driver of resource savings for emergency preparedness inspections (49 percent) is due to the proposed restructuring of the program to improve inspection efficiency, removing redundancies between PI data verification inspection activities, removing the redundancies in inspection effort related to PI&R inspections, moving to a biennial inspection schedule for all EP inspections, and focusing the inspection resources on the most risk-significant inspection activities. There will also be significant resource savings by reducing travel costs by restructuring the program such that onsite inspection effort will only be for evaluated exercises; all other EP inspection activities can be performed remotely.
4. **Radiation Protection Inspection Procedures:** Efficiency gains in the radiation protection program stem from a complete redesign of the inspection procedures. The new approach includes a performance-based review of work conducted during refueling outages, supplemented by three smaller IPs that address the remaining elements of the cornerstone.
5. **Other Baseline Inspection Procedures:** The main change in resource usage for other baseline inspections is from the elimination of the PI&R team inspection, which previously required 250 hours (125 hours annualized). This inspection will be reclassified as an infrequently performed procedure under IMC 2515, Appendix C, meaning that conduct of the inspection will require regional administrator approval.