

Resuming NRC-Conducted FOF Inspections

May 28, 2020

➤ Purpose

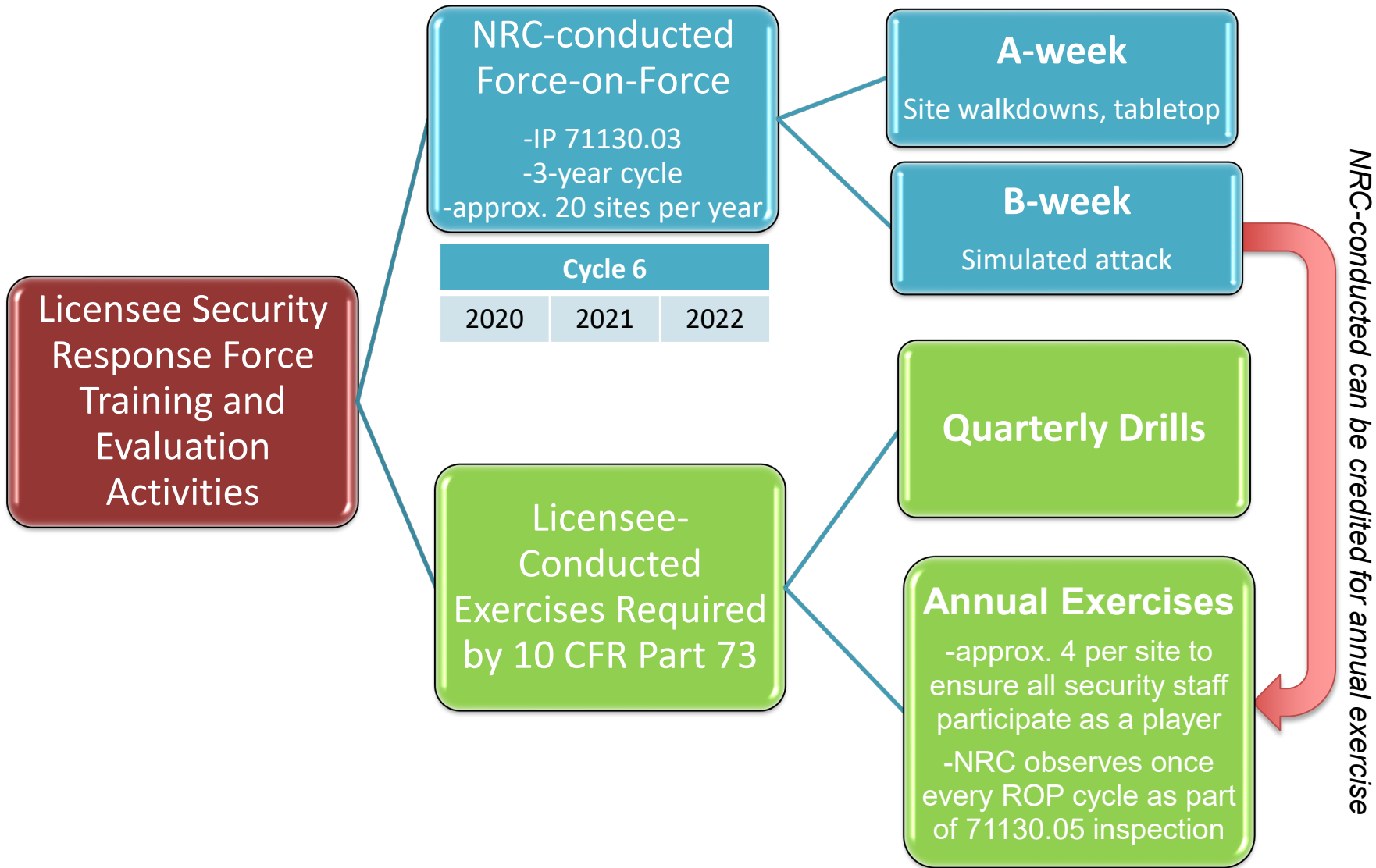
- To present the staff's plans for implementing NRC-conducted FOF inspections activities currently scheduled for CY2020.

➤ Agenda

- NRC FOF Inspection Program Overview
- NRC Response to Public Health Emergency (PHE) and Considerations for Inspections During a PHE
- Benchmarking Team Inspections
- Plan for Resuming NRC-Conducted FOF Inspection Activities

NRC FOF Inspection Program Overview

- Implementation: NRC Inspection Procedure 71130.03 “Contingency Response – Force-On-Force Testing,” dated January 1, 2017.
- Congressionally mandated: Section 170D of the AEA of 1954, as amended
- The NRC staff uses FOF exercises, which are performance-based inspection activities, to verify a licensee’s ability to meet the general performance objective and requirements of 10 CFR 73.55.
- NRC FOF Inspections include two weeks of on-site activities. The “A” week for mission planning and the “B” week for conducting exercises consisting of approximately 393 inspection hours.
- The inspection team consist of 3-4 headquarters inspectors supported by one inspector from the region, 1-2 SOCOM advisors and 3-4 DOE personnel for multiple integrated laser engagement system (MILES) equipment.
- The inspection utilizes a mock adversary force provided by either NEI or Entergy/NextEra.



NRC Response to PHE

- NRC has taken action to enable licensees to implement social distancing and assembly recommendations to conform to guidance from the federal government as well as state and local policies.
 - NSIR postponed all FOF inspections scheduled through June 2020 with a tentative restart scheduled for July 2020.
 - Staff recognizes that social distancing measures implemented by sites present a challenge for conducting a FOF inspection per the IP 71130.03 as currently designed.
 - During a closed public meeting held on May 12, industry voiced concerns over resuming onsite inspections due to impacts to currently-implemented pandemic plans, risk of infection being introduced to sites, and the size and nature of FOF inspections (especially B-week activities)
 - Inspection concerns include challenges associated with use of PPE during exercises, the need to conduct multiple briefings to ensure social distancing due to conference room capacity, and having multiple individuals in a bullet resistant enclosure during exercises.

NRC Response to PHE

- The regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, Appendix B, Section VI require individuals "assigned to perform duties and responsibilities required for the implementation of the Commission-approved security plans, licensee response strategy, and implementing procedures" to meet minimum training and qualification requirements.
- NRC issued EGM 20-002 to allow enforcement discretion for training and qualification requirements in 10 CFR Part 73, Appendix B, Section VI (ML20083K794).
- On April 20, 2020, NRC issued guidance for expedited exemptions (ML20091L385).
- The NRC-conducted FOF inspection is not part of the annual FOF exercise requirement and is therefore not part of the exemption.

Considerations for Inspections During a PHE

- Resuming NRC FOF Inspections:
 - State and local officials are implementing a phased plan for lifting restrictions and guidelines. The timeline for each region/community varies based on the impact for the respective area. The timelines are not set which creates an element of uncertainty.
 - 17 inspections are scheduled through the end of the CY2020; staff is considering a measured approach to account for the varied timelines for each region.
 - FOF inspections involve support from individuals that will travel from multiple geographic areas (i.e., NRC HQ staff, NRC regional inspectors, DOE contractors, SOCOM advisors, MAF) and involve sites bringing in additional shift security staff (B week only)

2020 NRC FOF Schedule

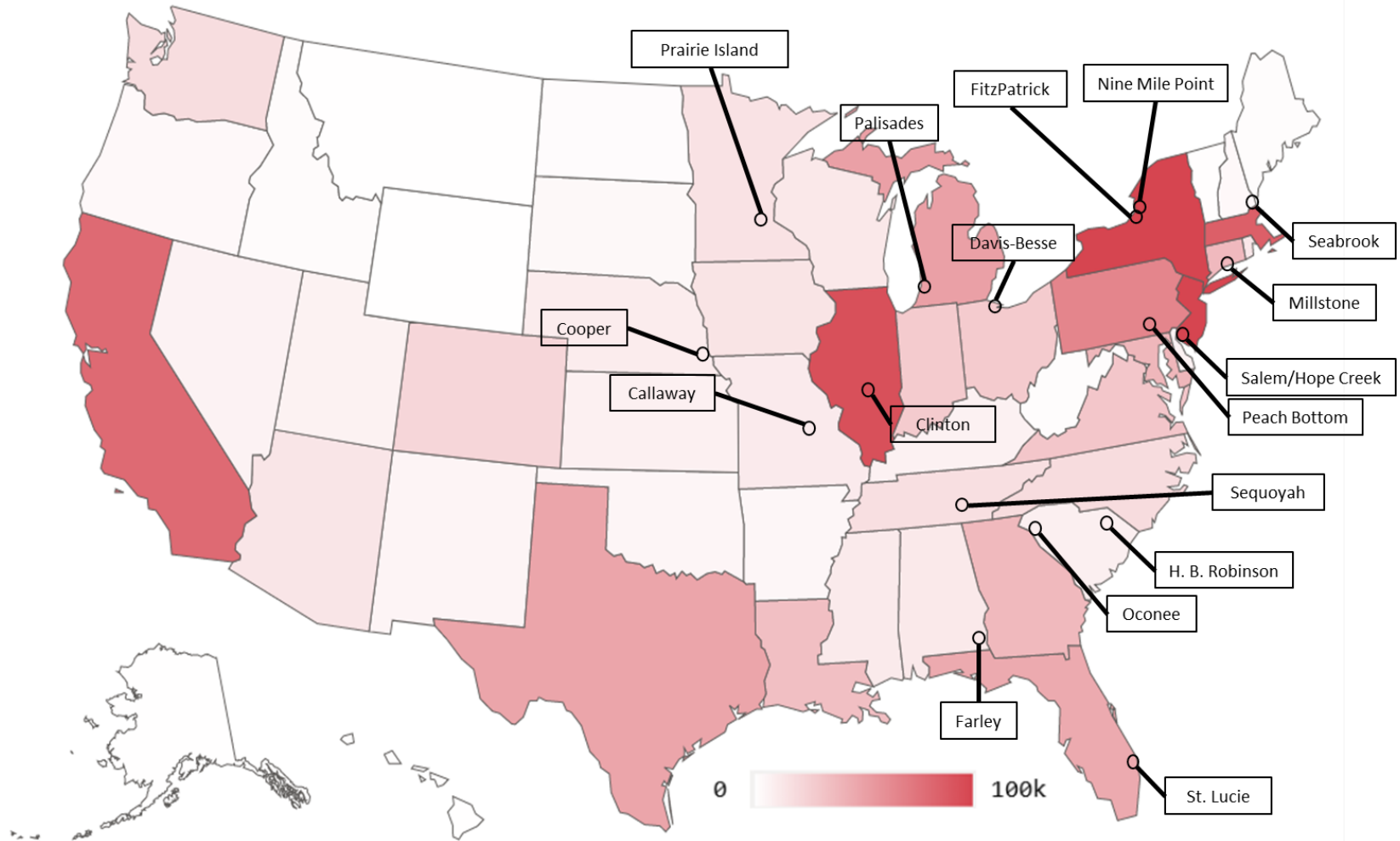
Site	Location	Fleet
VC Summer	Jenksville, SC	South Carolina Electric
Salem & Hope Creek*	Hancocks Bridge, NJ	PSEG
Sequoyah	Soddy Daisy, TN	TVA
HB Robinson	Hartsville, SC	Duke Energy
Farley	Dothan, AL	Southern
Peach Bottom	Delta, PA	Exelon
Millstone	Waterford, CT	Dominion
Callaway	Fulton, MO	Union Electric Company
Seabrook	Seabrook, NH	NextEra
Oconee	Seneca, SC	Duke Energy
St. Lucie	Jensen Beach, FL	NextEra
Nine Mile Point	Oswego, NY	Exelon
Clinton	Clinton, IL	Exelon
Palisades	Covert, MI	Entergy
Davis-Besse	Oak Harbor, OH	FENOC
Fitzpatrick	Lycoming, NY	Exelon
Prairie Island	Welch, MN	Excel
Cooper	Brownville, NE	Nebraska Public Power

*SHC completed "A" Week. "B" Week postponed until September.

Considerations for Inspections During a PHE

Tentative Criteria (may be revised)	A Week	B Week
Access to hotels & restaurants within commuting area of site available	X	X
Airline travel available (as required)	X	X
Out-of-State travel restrictions lifted (i.e., requirement to self-quarantine upon arrival in state)	X	X
Travel conditions allow DOE MILES trailer travel to inspection location in reasonable duration	N/A	X
PPE available for the inspectors	X	X
Site conditions support inspection (no COVID cases impacting security organization, and less than 10 employees with positive cases onsite)	X	X
Social distancing guidance can be achieved while on-site (to extent possible)	X	X
Security staff available from site shifts or other sites to support inspection positions	N/A	X

FOF Heat Map



FOF Heat Map

Site	Location	County (Pop.)	State Pop.	# of cases in state	% of State pop.	County Pop.	# of cases in county	% of County pop.
Salem & Hope Creek	Hancocks Bridge, NJ	Salem	8,882,000	146,000	1.6%	62,385	400	.6%
Sequoyah	Soddy Daisy, TN	Hamilton	6,829,000	17,388	.25%	367,804	342	.09%
HB Robinson	Hartsville, SC	Darlington	5,149,000	8,816	.17%	66,618	179	.26%
Farley	Dothan, AL	Houston	4,903,000	11,771	.24%	105,882	115	.10%
Peach Bottom	Delta, PA	York	12,800,000	62,234	.48%	449,058	817	.18%
Millstone	Waterford, CT	New London	3,565,000	37,419	1.04%	265,206	681	.25%
Callaway	Fulton, MO	Callaway	6,137,000	10,789	.17%	44,743	23	.05%
Seabrook	Seabrook, NH	Rockingham	1,360,000	3,596	.26%	309,769	1,010	.32%
Oconee	Seneca, SC	Oconee	5,149,000	8,816	.17%	79,546	37	.04%
St. Lucie	Jensen Beach, FL	Martin	21,480,000	45,588	.19%	161,000	281	.17%
Nine Mile Point	Oswego, NY	Oswego	19,450,000	350,000	1.7%	117,124	68/12	.05% /.01%
Clinton	Clinton, IL	DeWitt	12,670,000	64,191	.74%	15,769	4/3	.02% /.01%
Palisades	Covert, MI	Van Buren	9,987,000	51,142	.51%	75,448	112	.14%
Davis-Besse	Oak Harbor, OH	Ottawa	11,690,000	27,923	.23%	40,525	65	.16%
Fitzpatrick	Lycoming, NY	Oswego	19,450,000	350,000	1.7%	117,124	68/12	.05% /.01%
Prairie Island	Welch, MN	Goodhue	5,640,000	15,668	.27%	46,340	21	.04%
Cooper	Brownville, NE	Nemaha	1,934,000	10,348	.53%	6,958	1	.01%

Total/Active

Benchmarking Team Inspections

- NRC Regional Inspections – Following site-specific protocols per state and local policies and ROP Inspection & Oversight Transition Plan
 - **Region I:** 71130.05, “Protective Strategy Evaluation and Performance Evaluation Program,” inspection in June at Susquehanna was postponed. Additional security baseline inspections scheduled starting in July.
 - **Region II:** Planning to resume on-site inspection activities in July. Completed some inspection activities remotely.
 - **Region III:** Conducting remote inspections currently. Additional security baseline inspections starting in July/August (.05 inspections) – Looking at 2-3 month window
 - **Region IV:** Conduct on-site inspections in June (.05 inspection at River Bend scheduled for June was postponed).

Benchmarking Team Inspections

- DOE – Temporarily Suspended oversight for 180 Days
 - Effective early March.
 - 30 day notification to sites to resume inspection activity.
 - Working on plan to conduct inspections, with social distancing guidelines.
 - No plan to cancel inspections for 2020, tentative resumption dates August/September.

- International – Following protocols as established per the affected region as well as state and local policies.
 - (e.g., In March, Canada suspended oversight for 2-3 months.)

Plan for FOF Inspections

- NSIR will institute a rolling 6-8 week look at the PHE conditions at the sites that are in this window for both “A” and “B” week activities.
- Decisions regarding FOF inspections will be made based on site-specific conditions
 - ROP Inspection & Oversight Transition Plan and specific criteria used to inform decisions.
- Graded approach will be used for sites that are still under state/local PHE restrictions
 - Modified “A” week activities
 - Longer than typical gap between “A” week and “B” week
 - May be rescheduled (possible movement of some CY 2020 inspections to CY 2021)
- All sites for CY 2020 have been notified of their scheduled FOF inspections and are kept updated with changes as determinations are made.
- Social distancing measures and PPE will be used to promote health and safety during inspections.

Social Distancing Recommendations for Inspection Activities

Modified “A” Planning Week:

- NRC Team on site 1 to 2 days, Tuesday or Tuesday & Wednesday.
 - Conduct/Observe: Protective Strategy Brief, Site Tours (multiple tours/smaller groups), Table Top, Target Set review and coordinate with MAF Lead.

- MAF on-site 2 days, Coordinate days with NRC
 - Site tour, coordinate with NRC, insider coordination.

- Return to HQ for mission planning
 - Identify Targets and general routes.
 - PGP Target Set Worksheet to the site and MAF.
 - Delay full mission planning until determination of “B” Week.

Social Distancing Recommendations for Inspection Activities

- **Planning (“A”) Week Activities:**
 - Entrance/Exit Meetings: conducted virtually
 - Protective Strategy Briefing: NRC review presentation with minimal licensee personnel. Room large enough to exercise social distancing.
 - Site Tours: Conduct tours simultaneously; limit personnel on each tour.
 - Tabletop Drills: Conduct only with lead and adversary controllers to minimize personnel.
 - MAF Interface: Limit number of staff interaction in room big enough to practice social distancing.
 - Modified “A” week will be conducted to reduce on-site time

Social Distancing Recommendations for Inspection Activities

- **Exercise (“B”) Week Activities:**

- Scenario Matrix Review: Conducted virtually.
- Adversary Mission Overview and Controller Briefing: Attended by minimal personnel in room/area big enough to practice social distancing.
- Controller/Safety Briefings/Critiques/Hot Washes: Room big enough to practice social distancing, multiple briefing may be necessary due to number of personnel required. Conduct virtually, if possible.
- MILES Issue and Return: Conducted outside with social distancing practices in place. Equipment sanitized after each exercise. Ultraviolet light used in MILES trailer overnight.
- Exercise:
 - Inspection team observe from “distant” areas.
 - Limit personnel in BREs.
 - Players and MAF practice social distancing and wear facemasks when unable to space.
 - Licensee consider positioning of on-duty force to minimize exposure and stay in compliance.

ALTERNATE OPTIONS AND FACTORS CONSIDERED

Inspection Reset & Temporary Instruction

- Staff considered conducting a headquarters based review (per a TI) of the security posture and rescheduling the FOF Inspection.
 - Review past Triennial FOF performance for 2 cycles.
 - Review drill & exercise information for Internal FOF program and associated CRs.
 - Review Security Baseline findings since last NRC FOF.
 - Review current submitted physical security plan.
 - Review licensee submitted protective strategy brief.
 - Include any recent or planned modifications
 - Review applicable 50.54p if needed.
 - Reschedule FOF Inspection for 2021 and reset clock.

Automated Vulnerability Evaluation for Risks of Terrorism (AVERT)

- AVERT is an analytical tool for evaluating physical security systems and identifying security vulnerabilities. It may also be used to evaluate changes in operational planning and potential upgrades.
- From DOE AVERT verification, validation and accreditation effort (January 2018)
 - AVERT is recommended for facility characterization for use in pathway analysis.
 - AVERT is recommended for pathway analysis and characterization.
 - AVERT is NOT recommended for combat simulation.
 - AVERT is NOT recommended for calculating system effectiveness.
- NSIR staff recognizes that DOE analyzed several releases of AVERT version 5, and that most licensees using AVERT are now using a version between 8.0 and 8.5 (current release). However, during a meeting with ARES on May 6, 2020, it was confirmed that the same software limitations that DOE identified with versions 5.x still apply.

Automated Vulnerability Evaluation for Risks of Terrorism (AVERT)

- Concerns with using AVERT software as replacement for FOF exercises:
 - has automated pathway analysis with flaws, and simplistic combat model (not accredited for combat effectiveness)
 - does not allow for coordination between adversaries
 - has issues with accurately representing communications, sensors and cameras, and specialized equipment (security force has perfect communication)
 - “credits players with 360-degree vision and hearing (can detect gunshot across site), adversary only has 360-degree vision”
 - has issues with accurately representing level of knowledge (once detected entire security force has knowledge of adversary location and actions)

Assessment of Statute Language

Requirements: Section 170D of the AEA of 1954, as amended

a. SECURITY RESPONSE EVALUATIONS. *Not less often than once every 3 years, the Commission shall conduct security evaluations at each licensed facility that is part of a class of licensed facilities, as the Commission considers to be appropriate, to assess the ability of a private security force of a licensed facility to defend against any applicable design basis threat.*

b. FORCE-ON-FORCE EXERCISES.

(1) *The security evaluations shall include force-on-force exercises.*

(2) *The force-on-force exercises shall, to the maximum extent practicable, simulate security threats in accordance with any design basis threat applicable to a facility.*

(3) *In conducting a security evaluation, the Commission shall mitigate any potential conflict of interest that could influence the results of a force-on-force exercise, as the Commission determines to be necessary and appropriate.*

Assessment of Statute Language

Statutory Requirement – AEA § 170D

c. ACTION BY LICENSEES. The Commission shall ensure that an affected licensee corrects those material defects in performance that adversely affect the ability of a private security force at that facility to defend against any applicable design basis threat.

*d. Facilities Under **Heightened Threat Levels**.--The Commission may suspend a security evaluation under this section if the Commission determines that the evaluation would compromise security at a nuclear facility under a heightened threat level.*

e. REPORT. Not less often than once each year, the commission shall submit to the Committee on Environmental and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report....that describes the results of each security response evaluation conducted and any relevant corrective action taken by a licensee during the previous year.

Summary of Path Forward

- Use graded approach to conduct inspections to the extent that activities can be conducted safely and in harmony with site/locality/State-conditions and controls
 - Coordinate with sites 6-8 weeks prior to scheduled inspection date to consider decision criteria
 - A Week activities resume in July; B week activities in August/September if conditions permit
 - Resumption of inspections by August 3 could allow AEA to be met for CY 2020 inspections

Summary of Path Forward

- Continue internal and external coordination
 - Benchmarking and sharing best practices with NRR and Regions on ROP implementation including timing of inspections, impact of NRC presence onsite, and any situational considerations for performance based exercises (e.g., impact of PPE on responder performance)
 - Discussions with industry
 - Interface with OCA/include updates in 2021 Annual Security Report to Congress to explain FOF impacts from PHE

Summary of Path Forward

- Assess schedule impacts over time and revisit approach if needed
 - If unable to conduct B weeks in CY2020, may decide prudent path is to reschedule CY 2020 FOF inspections to CY2021 and reset AEA cycles (e.g., CY 2021 inspections would be moved to CY 2022).

Reactor Oversight Process (ROP) Cycle

2020 (Year 1)	2021 (Year 2)	2022 (Year 3)	2023 (Year 4)	2024 (Year 5)	2025 (Year 6)	2026 (Year 1)
ROP Cycles						
Triennial Inspection			Triennial Inspection			
Biennial Inspection		Biennial Inspection		Biennial Inspection		
FOF Inspection (Every 3 years)			FOF Inspection			
	FOF Inspection (Every 3 Years)			FOF Inspection		