



United States Nuclear Regulatory Commission  
*Protecting People and the Environment*

**RIC 2014**  
**The Future of the NRC Force-on-Force Inspection Program**

**Division of Security Operations**  
**Office of Nuclear Security and Incident Response**  
**March 13, 2014**

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**Force-on-Force Inspection Program Evaluation and Assessment**

- Gain inspection program efficiencies
- Reduce regulatory burden
- Maintain inspection program effectiveness
- Evaluate Licensee Annual Force-on-Force Exercises

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**Topics of Discussion**

- Statutory Basis for Force-on-Force (FOF) Exercises
- The FOF Inspection Process
- 2013 Pilot Licensee Performance Evaluation Program Inspections

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**Topics of Discussion (continued)**

- FOF Program Updates
- Future of the FOF Program
- Significance Determination Process Updates

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**NRC-Evaluated  
Force-on-Force Inspection Program and  
Significance Determination Process**

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**Statutory Basis**

Atomic Energy Act of 1954 As Amended,  
Subtitle D – Nuclear Security, Section 170D,  
Security Evaluations; and the Energy Policy  
Act of 2005.

- NRC authority to conduct FOF exercises to assess a licensee’s ability to protect against the Design Basis Threat (DBT).
- Mandate for NRC-led FOF Exercises on a 3-year frequency.
- Exercises must simulate threats to the maximum extent practicable.

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### Statutory Basis (continued)

- Exercises must ensure licensees correct defects in performance, if identified.
- Exercise results and corrective actions must be reported annually to Senate and House oversight committees.

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### FOF Inspection Process

- 10 CFR 73.55 states in part that licensees shall demonstrate the ability to meet the Commission's requirements.
- Current program verifies and assesses the ability of licensee's physical protective strategy to provide high assurance that activities involving special nuclear material do not constitute an unreasonable risk to public health and safety.
- The program has proven to be highly effective in evaluating licensee's ability to protect against the DBT.

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### NRC FOF Program Update for Operating Power Reactors



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## 2013 Pilot, Licensee Performance Evaluation Program Inspections

- Conducted to verify the adequacy of Licensee Performance Evaluation Programs
  - Implement a performance evaluation program
    - Annual FOF exercise
    - Quarterly drills and exercises
  - Assess the protective strategy
  - Identify and correct deficiencies

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## 2013 Pilot, Licensee Performance Evaluation Program Inspections

- Conducted 4 Pilot inspections - one per Region
  - Revised the baseline inspection program
    - Observation of licensee Annual FOF Exercises
      - Reduce redundancies in the inspection program
      - Reduce inspection efforts related to FOF inspections
    - FOF program changes
  - Working toward an enhanced critique process

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## NRC FOF Program Update Phased Approach



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### NRC FOF Program Update Phase 1

- Headquarters led inspection activity
  - 2 week inspection
    - A week - planning week
      - Protective strategy brief
      - Tours
      - Scenario development
    - B week – exercise week
      - 2 Performance based exercises
      - 1 Formal Critique



**Nuclear Power Plant Security Zones**

Outer Controlled Area, Protected Area Intrusion Detection System, Vital Area, Access Control Points, Restricted Area

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### NRC FOF Program Update

- Basis for Program Changes:
  - Performance Evaluation Program Inspections
  - Baseline inspection program revised to incorporate NRC-observations of licensee annual FOF exercises (Regional Inspectors)
  - Formalized Critique Process



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### NRC FOF Program Future Phase 2

- Projection Calendar Year 2017
- NRC-led inspection activity
  - 2 week inspection
    - A week - planning week
      - Protective strategy brief
      - Tours
      - Scenario development
    - B week – exercise week
      - 1 Performance based exercise
      - 1 Formal Critique



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### NRC FOF Program Future Predicated On

- Successful and Testing of Performance Indicators related to the Licensee's Protective Strategy
- Refined and formalized Critique Process
- Assessment performance evaluation program inspection effort



Guard Tower

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### FOF Significance Determination Process (SDP) Enhancements

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### Previous FOF SDP

Previous version of the FOF SDP was issued in July 2012

- Incorporated Program Threshold Criteria
  - Established Criteria to be used during the significance determination process.
  - Used to address situations where an unsuccessful exercise was not reflective of the licensee's overall security performance.
- SDP outcomes were based on the conduct of 3 exercises

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## FOF SDP Revision

Current SDP issued January 2014

- More predictable and repeatable
  - Reduce subjectivity in assigning significance to findings
- Ensure the appropriate level of oversight is provided for licensees whose exercise performance warrants additional oversight
- Flexibility in evaluating the various exercise outcome conducted during NRC FOF inspections

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## FOF SDP Revision

- Major revisions:
  - Broadened the SDP to evaluate the various outcomes for the number of NRC-evaluated exercises that could be scheduled
  - Inclusion of Canceled and Indeterminate exercises
  - Expanded the use of Program Threshold Criteria (PTC)
    - Applied to all exercises that result in an exercise finding

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## FOF SDP Revision

- Summary:
  - Regulatory Authority - Atomic Energy Act of 1954 As Amended, Subtitle D - Nuclear Security, Section 170D, Security Evaluations, and the Energy Policy Act 2005.
  - FOF inspections verify and assess the ability of licensee's physical protective strategy to provide high assurance that activities involving special nuclear material do not constitute an unreasonable risk to public health and safety.
  - Pilot Inspections were completed in 2013 (NRC-observations of Licensee Performance Evaluation Programs implementation of Annual FOF exercises)
  - NRC developed a phased approach for current and future FOF program development.
  - The SDP was revised to provide the agency with the appropriate options in conducting regulatory oversight once program deficiencies have been identified.

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