



**RIC 2010
Enhancements to the NRC's
Force-on-Force Inspection Program**

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Statutory Basis

Section 651(a) of the Energy Policy Act of 2005, which adds section 170D to the Atomic Energy Act of 1954 (42 U.S.C. 2201 et seq.) as Amended, Security Evaluations:

- Mandates that Force-on-Force (FOF) exercises are conducted by the Commission every three years to assess a licensee's ability to defend against the design basis threat (DBT).
- Exercises must simulate threats to the maximum extent practicable.

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Statutory Basis (cont.)

Section 651(a) of the Energy Policy Act of 2005, which adds section 170D to the Atomic Energy Act of 1954 (42 U.S.C. 2201 et seq.) as Amended, Security Evaluations:

- 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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Current Program Implementation

- Verifies and assesses the effectiveness of licensees' implementation of their protective strategies.
- Provide high assurance that activities involving special nuclear material do not constitute an unreasonable risk to public health and safety.

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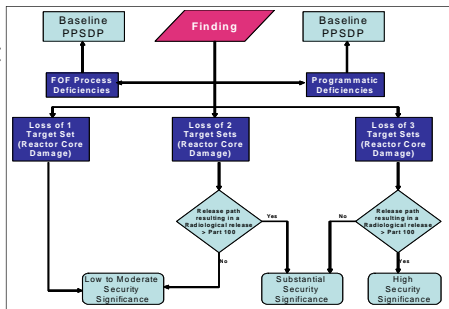
Significance Determination Process (SDP)

- Purpose is to provide an objective and consistent means of evaluating findings identified during inspection.
- Used to evaluate the projected outcome of a simulated attack.

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Current SDP Flow Chart



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FOF Program Review

- In late 2008 through the first quarter of 2009 NSIR staff conducted a review of the FOF inspection program.
- The review of program elements incorporated lessons learned and industry best practices.
- Based on the results, the staff began to consider ways to enhance the SDP of the FOF inspection program.

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Program Review Results

- Current SDP tool has been effective at facilitating the assessment of the results of triennial FOF exercises.
- Many complexities, artificialities and simulations in conducting the NRC evaluated FOF exercises.

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Program Review Results (cont.)

- Over reliance on exercise results only may impact the NRC's ability to come to a realistic conclusion and determination of the overall adequacy of a licensee's protective strategy.
- Current SDP tool does not consider other aspects of the licensee's overall security programs in conjunction with the exercise results.

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Proposed Enhancements

- Licensee performance during the NRC conducted triennial exercises will remain the core program element to be assessed during FOF inspections.
- The enhancement process would include an evaluation of additional data that is gathered and assessed when implementing inspection objectives and activities associated with the current program.

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Industry Proposal

- Broader evaluation base that focuses on continuous improvement in the effective implementation of the overall security protective strategy
- Comprehensive evaluation program.
- The NRC proposed enhancements address the industry proposal by adding additional attributes for consideration during the FOF inspection.

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Additional Inspection Data

Proposed Protective Strategy and Training Attributes:

- Target Set Development,
- Preparation-Planning Visit (e.g., Controller Training, Tabletops),
- Scenario Matrix Development,
- Drill/Exercise Execution (e.g., Controller Performance),
- Licensee Exercise Performance.

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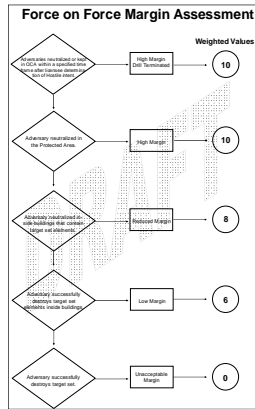
Exercise Margin Assessment Tool

- A newly developed "Exercise Margin Assessment Tool" is being proposed to be used to make an assessment of the licensee demonstration of their protective strategy during the triennial NRC-evaluated exercises.

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Exercise Margin Assessment Tool Flow Chart



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Proposed Assessment of FOF Inspection Results

- The assessment and significance determination of the inspection is proposed to be the summation of the results from the three exercises combined with an overall score from "weighted" values (additional data) for each of the protective strategy and training attributes.

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Next Steps

- Conduct a Category 3 Public Meeting in April 2010 (Postponed from February 2010).
- Conduct feasibility assessments in parallel with FOF inspections (1st and 2nd Quarter CY 2010) comparing the current FOF SDP to the proposed enhancements for a revised FOF SDP.
- Staff Requirements Memorandum - M100112 - *"The staff should report back to the Commission on how the proposed enhancements to the FOF physical protection significance determination process (PPSDP) would alter the CY 2009 FOF exercise findings"*.

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Next Steps (cont.)

- Inform the Commission on the approach for enhancements to the FOF Inspection Program.
- Consider implementation of the program enhancements during the conduct of the FOF inspection program in Calendar Year 2010.

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