



Public Meeting

Self-Assessment and the Future of the Force-on-Force  
and Baseline Security Inspection Programs

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## Agenda

- Background of NRC FoF Inspections
- Review (COMGEA/COMWCO-14-0001)
- What We Did (SECY 14 0088)
  - Analyses
  - Recommendations
  - Options
  - Staff Commitment
- Commission Directions
- Where we are
- What are the challenges
- Next Steps

## Background

- Regulatory Effectiveness Reviews
- Operational Safeguards Response Evaluations
- Response to September 11, 2001
  - Interim Compensatory Measures
  - Expanded Table-Top Exercises
  - Expanded FOF Exercises

In November 2004, NRC began implementation of its redesigned, full-scale force-on-force program with the intent of performing exercises at each licensee every three years.

Three inspection cycles have been completed since the 2004 program was implemented.

## **Commission-Directed Lessons-Learned Review**

COMGEA/COMWCO-14-0001 issued February 11, 2014:

The staff should conduct a lessons-learned review of the Nuclear Regulatory Commission's force-on-force inspection program to evaluate whether any adjustments are necessary to ensure efforts in this area are accomplishing intended objectives effectively and whether NRC's and licensees' efforts are focused on the most important issues to ensure security and safety at the sites.

# Methodology for responding to the staff requirements memorandum

## Phase I

- Data Collection and Analysis
- Literature Review
- Benchmarking
- Best Practices
- Solicited and Considered Stakeholder Feedback

## Phase II

- Analyzed Phase I data
- Developed Options and Recommendations
- Delivered Final Review Results (SECY-14-0088, dated 8/21/2014)

## Stakeholder Perspectives

As part of the lessons-learned review, the NRC staff held a public meeting, including an open and closed session, on May 5, 2014, to discuss the force-on-force program and the questions posed by the Commission in SRM COMGEA/COMWCO-14-0001. The staff included feedback received at the May 5, 2014, meeting and that included in a June 11, 2014, letter from the Nuclear Energy Institute in its response to the Commission (SECY-14-0088).

## What we did (Analyses)

- The FOF lessons-learned working group conducted a review of the FOF program and provided the results to NSIR/DSO management.
- Benchmarked with Federal Partners and Compared Best Practices with International Organizations
- Based on the working group's review, NSIR/DSO management crafted SECY 14 0088 to provide options and recommendations to the Commission.
- The paper provided recommendations in three areas:
  - Adversary tactics, techniques, and procedures (TTPs)
  - Exercise realism via revision of Multiple Integrated Laser System (MILES) software.
  - Unattended openings

# FoF TTP WG Briefing

## What we did (continued)

In addition to the options and recommendations, the staff committed to take action on the following:

- Working with industry to identify, validate, and benchmark mechanisms, such as the use of simulation software, to evaluate potential vulnerabilities that may be inappropriate for performance testing during an NRC-conducted FOF exercise.
- Updating the Significance Determination Process used to prioritize deficiencies associated with the security baseline inspection program.
- Providing guidance to industry on compensatory measures.
- Developing better guidance on exercise control and mission planning to improve the realism and effectiveness of NRC- and licensee-conducted FOF exercises.
- Evaluating updates to the FOF inspection procedure to provide flexibility and better guidance regarding the inside information provided to the CAF for NRC-conducted FOF exercises.



## Options and Recommendations

The staff provided options and recommendations in three areas:

1. Adversary tactics and procedures

The staff recommended that the Commission direct the staff to establish a working group to inform the tactics, techniques and procedures used by the Composite Adversary Force using real-world information.

2. Multiple Integrated Laser System software

The staff recommended that the Commission direct the staff to restore the Multiple Integrated Laser System software to its original configuration to include light and critical wound inputs.

## **Options and Recommendations (continued)**

### **3. Unattended openings**

The staff recommended that the Commission maintain the current requirements for unattended openings to provide high assurance that an adversary cannot exploit these openings.

## **Staff Commitments**

The staff committed to take action on the following:

1. Working with industry to identify, validate, and benchmark mechanisms, such as the use of simulation software, to evaluate potential vulnerabilities that may be inappropriate for performance testing during an NRC-conducted force-on-force exercise.
2. Updating the Significance Determination Process used to prioritize deficiencies associated with the security baseline inspection program.

## **Staff Commitments (continued)**

3. Providing guidance to industry on compensatory measures.
4. Developing better guidance on exercise control and mission planning to improve the realism and effectiveness of NRC- and licensee-conducted force-on-force exercises.
5. Evaluating updates to the force-on-force inspection procedure to provide flexibility and better guidance regarding the inside information provided to the Composite Adversary Force for NRC-conducted force-on-force exercises.

## **Commission Direction – Adversary Tactics**

- The Commission approved the staff’s recommendation to establish an NRC working group to determine how to better integrate knowledge of adversary training methodologies and actual attacks with the tactics, techniques, and procedures used by the NRC composite adversary force.
  - The Commission directed the staff to provide periodic updates to the Commission on this activity, and to report the working group’s findings to the Commission in a notation vote paper.

# Commission Direction – Multiple Integrated Laser Engagement System

- The Commission disapproved the staff's recommendation to restore the Multiple Integrated Laser Engagement System to its original condition and directed the staff to use the existing change management process to fully evaluate the pros and cons of this change to determine if it would result in an overall enhancement to force-on-force exercises.

## **Commission Direction – Unattended Openings**

- The Commission directed the staff to account for the realistic ability for specific opening configurations to be exploited when evaluating inspection findings and assessing licensee corrective actions.
- The Commission directed the staff to evaluate the NRC requirements for unattended openings through the same NRC working group that is being established to evaluate adversary tactics, techniques and procedures.

## Commission Direction – Staff Commitments

- The Commission supported the staff's commitment to actions not requiring Commission approval, and directed the staff to:
  1. Continue working with industry to review and reduce the number of extensive simulations used in developing and executing FOF scenarios by identifying, validating, and benchmarking mechanisms, such as the use of simulation software, to evaluate potential vulnerabilities that may be inappropriate for performance testing during an NRC-conducted FOF exercise;
  2. Review and update the physical protection significance determination process;



## **Commission Direction – Staff Commitments Continued)**

3. Issue a generic communication to licensees to clarify the NRC's expectations regarding the implementation of compensatory measures; and
  4. Enhance guidance, training, and inspection program documents in the effort to improve the realism and effectiveness of FOF exercises.
- The Commission directed that the staff provide an information paper to the Commission, annually, providing the status of these actions.

# **Force on Force Tactics, Techniques and Procedures Working Group**

## **Description of the FoF Tactics, Techniques and Procedures Working Group**

- **Purpose** - Determine how to better integrate knowledge of adversary training methodologies and actual attacks with the tactics, techniques, and procedures used by the NRC composite adversary force
- **Working Group Membership** - (made up of staff from NSIR, NRR, NMSS, OGC, OE, the regions)
- **Steering Committee** - Composed of NRC management at the Deputy Office Director and Deputy Regional Administrator level
- **Duration** - Established for an initial period of 18 months
- **Actions and Products**

Action	Product(s)
1. Identify guidance requiring enhancement or development.	1.a. For each guidance document requiring enhancement document objectives and specific deficiencies to be addressed.
	1.b. For each guidance document to be developed, document general requirements and objectives to be addressed.
2. Identify controller training program deficiencies.	2.a. Document specific deficiencies to be addressed.
	2.b. Identify deficiencies in inspection procedures or inspection procedure guidance.
3. Identify Mock Adversary and Mission Planner guidance deficiencies	3.a. Document specific deficiencies to be addressed.
	3.b. Identify deficiencies in inspection procedures or inspection procedure guidance.
4. Identify demonstrated Tactics, Techniques, and Procedures of actual adversaries.	
5. Identify demonstrated Tactics, Techniques, and Procedures of the Composite Adversary Force.	
6. Perform a gap analysis between 4. and 5.	6.a. Document gaps for resolution.
	6.b. Steering Committee briefing
	6.c. Document issues to be resolved in guidance.
7. Determine delta between MILES original programming and current programming	7.a. Direct contrast and comparison be conducted and reported on.
	7.b. Document recommendation on MILES in accordance with SRM.
8. Submit CA Note on Working Group Status.	8.a. Approved CA Note.
9. Review UAO SDP and UAO evaluation process.	9.a. Concurrence by WG.
10. Review Regulatory Issue Summary on Compensatory Measures	10.a. Concurrence by the WG.
11. Submit CA Note on staff commitments	11.a. Approved CA Note
12. Determine status of staff commitments	12.a. Document status of staff commitments
13. Develop input for Notation Vote Paper	13.a. Document actions and recommendations
14. Develop Tactics, Techniques, and Procedures evaluation method	14.a. Document process and guidance.

## Where we are

In SRM-SECY-14-0088, the Commission directed the staff to:

- Establish a working group to determine how to better integrate knowledge of adversary training methodologies and actual attacks with the TTPs used by the NRC CAF and use the working group to evaluate unattended opening requirements.
- Conduct additional outreach and evaluation on MILES software changes.
- Continue efforts on the commitments outlined in SECY-14-0088.
- Keep the Commission informed of the status of the FOF program via an annual Information Paper and a Notation Vote Paper on the working group's activities (June 2016).

The working group has been established and has approved its charter. The charter is currently with the Steering Committee (composed of Deputy Office Directors and Deputy Regional Administrators) for final approval.

## Where we are (continued)

The Working Group has met four times and has received briefings on selected topics it has also approve;

- Received an overview of the current threat environment
- Regulatory Issue Summary (RIS) on Compensatory Measures: the staff has developed a RIS to clarify compensatory measures requirements for security. The working group has reviewed the draft RIS and made a recommendation for issuance to the Office of Nuclear Reactor Regulation.
- Revisions to the significance determination process for unattended openings: The NRC headquarters and regional staff have reviewed and commented on the proposed revisions, which has been forwarded to the working group for review and concurrence. The working group will finalized its recommendation on the unattended opening SDP and forward to the steering committee.
- The working group has received an update on a Threat Product detailing the current adversary training. This document will form the basis for future analyses on realism in FoF inspections.

## What are the challenges

- The working group has a number of issues to review in a relatively short timeframe and has been tasked with multiple communications to the Commission over the next 14 months.
- Maintaining frequent, timely, and effective communications with external stakeholders.
- Ensuring a balanced and realistic inspection program that effectively focuses both NRC and licensee resources.

# Draft Unattended openings (UAO) Significance Determination Process (SDP)



Dana Caron: Senior Physical Security Inspector, Region I



# UAO SDP

- Background
- Philosophy
  - Repeatable and Predictable Tool
- Guidance
  - Defense In Depth/Graded Approach
  - Physical Barriers and Intrusion Detection Systems
  - UAO Size Based On NEI 09.05 Guidance
- Next Steps

# Background

- UAO SDP working group established prior to force-on-force (FOF) SRM.
- The group was a collection of staff from each region and HQ with a high level of expertise in the Reactor Oversight Process and security inspection activities.
- The group evaluated several options to determine which would offer the most consistent application.
- Options were presented to NRC management and the FOF Tactics, Techniques, and Procedures Working Group (FOF TTP WG) for option approval
- Numerous postulated scenarios were used to assess the application of the new SDP to ensure the new tool would not only be consistent, but predictable and repeatable.

# Philosophy

- The working group used a philosophy of defense in depth using readily identifiable criteria that would enable consistent application to achieve predictable and repeatable outcomes.
- As well, the group minimized subjective criteria, which had historically caused challenges in using the SDP.
- The group determined that security measures which contribute to defense in depth and are implemented at all site's were basic sound tenants of a physical protection program and therefore were used as the basis for the SDP.
- The outcomes were informed by postulating threat scenarios within the scope of the DBT of radiological sabotage including associated adversary characteristics.

## Next Steps

- Revised SDP will be provided to FOF TTP WG Steering Committee for approval.
- The Draft SDP will be provided to the regions and stakeholders for comment then finalized for issuance.
- Expected issuance in Calendar Year 2015.

## Compensatory Measures Guidance

**Purpose.** In response to Question 9 of SRM-COMGEA/COMWCO-14-0001, the staff identified that licensees may be applying immediate compensatory measures in cases where such measures are not required.

**Action.** In accordance with SRM-SECY014-0088, NRC staff will issue a Regulatory Issue Summary (RIS) to clarify the NRC's expectations regarding the implementation of compensatory measures.

### **RIS Guidance.**

- The RIS will identify applicable regulatory requirements for compensatory measures.

## Compensatory Measures Guidance

The RIS will identify specific regulatory requirements for compensatory measures, which include:

- Conducting a site specific analysis to determine the specific function of security systems, equipment, components, and processes,
- identification of criteria and measures for the implementation of compensatory measures for protective strategy deficiencies and degraded or inoperable security systems, equipment, components, or processes;
- identification of specific time frames of the implementation of compensatory measures necessary to ensure that the capability to detect, assess, interdict, and neutralize threats to the facility are maintained at all times; and
- confirming that compensatory measures provide an equivalent level of protection.



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## Next Steps

- Continue Analyses
- Meeting with Federal Partners (DoE, DoD, etc.)
- Issue the Regulatory Issue Summary (RIS) Compensatory Measures Guidance
- Conduct a Category II meeting with Industry
- Continue Interactions with Stakeholders



# Questions