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September 27, 2018

Ms. Marissa Bailey
Director, Division of Security Operations
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: NEI Recommendation for an Option Concerning the Establishment of a Mock Adversary Force to Support Force-on-Force Exercises

Project Number: 689

Dear Ms. Bailey:

As a result of discussions with the U.S. Nuclear Regulatory Commission (NRC) staff during a public meeting on August 22, 2018,¹ the Nuclear Energy Institute (NEI)² and its members are providing the following recommended option for the establishment of a Mock Adversary Force (MAF)³ to support the NRC triennial Force-on-Force (FoF) exercise inspections.⁴

NEI and its members recommend the development of performance-based standards and guidelines for a MAF team to allow licensees the flexibility to use a fleet MAF, a MAF provided through an alliance with other sites or fleets, or a MAF provided by a vendor.

This recommendation is consistent with ongoing efforts by the NRC to transform its regulatory framework⁵ and is fully described in the attachment to this letter.

¹ Refer to ADAMS Accession Numbers ML18222A300 and ML18233A313.

² NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

³ Reflecting the wording from the NRC public meeting on August 22, 2018, and the associated presentation, we are using the term "Mock Adversary Force" to mean the team or teams that could replace the NEI-managed CAF.

⁴ Inspections conducted in accordance with NRC Inspection Procedure (IP) 71130.03, "Contingency Response – Force-on-Force Testing."

⁵ A discussion of the NRC's regulatory transformation initiative is presented in SECY-18-0060, "Achieving Modern Risk-Informed Regulation."

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We ask that the staff consider our recommendation during development of the Notation Vote paper on this subject to be submitted to the commission by December of this year, and include it as an option for the commission deliberation.

If you have any questions or require additional information, please contact AJ Clore at (202) 739-8025 or ajc@nei.org, or me.

Sincerely,

A handwritten signature in black ink, appearing to read "William R. Gross". The signature is written in a cursive style with a long horizontal stroke at the end.

William R. Gross

Attachment

cc: Mr. Andrew Pretzello, NSIR/DSO, NRC
Mr. Dante Johnson, NSIR/DSO/SPEB, NRC
Mr. David Bradfield, NSIR/DSO/SPEB, NRC

Recommendation for a Mock Adversary Force to Support NRC Triennial Force-on-Force Exercise Inspections⁶

NEI and its members recommend the development of performance-based standards and guidelines for a Mock Adversary Force (MAF) team to allow licensees the flexibility to use a fleet MAF, a MAF provided through an alliance with other sites or fleets, or a MAF provided by a vendor.

Benefits to Licensees

- Minimizes the regulatory burden on licensees consistent with the need to support the NRC's legal and regulatory requirements to evaluate Force-on-Force (FoF) exercises.
 - Our recommended approach would permit licensees to use a fleet MAF, a MAF provided through an alliance with other sites or fleets – similar to the Entergy and NextEra Joint Composite Adversary Force (JCAF) – or a MAF provided by a vendor – similar to the current NEI Composite Adversary Force (CAF).
- Licensee performance evaluation programs would continue to benefit from the integration of knowledge and experience gained by individuals who participate in MAF assignments, as discussed in the Background section below.
- Promotes more accurate and timely sharing of FoF exercise operating experience across the industry.
- The formation of any additional industry MAF teams (i.e., in addition to the current two) would create new professional and leadership development opportunities for industry security personnel.

Benefits to the NRC

- The NRC is currently inspecting FoF exercises involving the NEI CAF and the Entergy and NextEra JCAF, so adding provisions to inspect exercises using a MAF team provided by another industry source should not entail significant changes to NRC inspection programs and procedures.
- Eliminates the need to engage other Federal departments and agencies, or vendors, in establishing and maintaining an NRC MAF team.
- Implementation would drive development of performance-based standards and guidelines applicable to all MAF teams and covering such topics as training, qualification, capabilities, independence and oversight.
 - Promotes consistent MAF team performance across the industry.
 - The standards and guidelines could be created through engagement with the industry, and issued or endorsed by the NRC.

It is anticipated that development of the standards and guidance needed to implement our recommendation could also provide an opportunity to address some of the FoF exercise improvements discussed in NEI letter, "Suggested Improvements to the Force-on-Force Exercise Inspection Process," Perkins-Grew to McDermott, dated August 8, 2018.

⁶ Inspections conducted in accordance with NRC Inspection Procedure (IP) 71130.03, "Contingency Response – Force-on-Force Testing."

Knowledge Transfer

Since 2004, NEI has contracted with a third party to provide the CAF team used by the NRC as the MAF during triennial inspections conducted in accordance with NRC Inspection Procedure (IP) 71130.03, "Contingency Response – Force-on-Force Testing." The individuals comprising the NEI CAF team are drawn from nuclear power plant sites and serve for a 2-year period. Following completion of their assignment, and having participated in approximately 45 FoF exercises, each individual then returns to their company. This arrangement allows ex-CAF team members to share their knowledge and experience with fleet and site MAF teams. Over time, the capabilities of licensee MAF teams have been significantly improved through this knowledge and experience sharing, thus enhancing the effectiveness of performance evaluation programs.

Anticipated Supporting Actions

NEI and its members are prepared to engage with the NRC staff to develop the performance-based standards and guidelines necessary to implement our recommended approach. For example, training and qualification standards in NSIR/STD-2004/15-001, "Composite Adversary Force Performance Standards for Force-on-Force Exercises" could be updated to ensure that it addresses the NRC's expectations for a licensee MAF team. Other guidance documents may be needed for ensuring MAF independence and conducting oversight activities to verify adherence to standards and guidelines.

Input to Evaluation Criteria

The presentation used by the NRC in the public meeting on August 22, 2018, listed eight "Evaluation Criteria" to be used by the staff in assessing options for replacing the NEI-managed CAF. The table below provides input to the staff for the evaluation of our recommended approach.

1. Credibility of the MAF

- a. All MAF teams would have to meet the same set of performance-based standards and guidelines, therefore, all teams should have equal credibility.
- b. In most cases, the MAF team participating in a triennial FoF exercise would be one that supports implementation of a fleet or site performance evaluation program, including teams observed during inspections in accordance with IP 71130.05 "Protective Strategy Evaluation and Performance Evaluation Program." MAF teams capable of supporting tactical response drills and licensee-led FoF exercises adequately replicate the Design Basis Threat and are sufficiently credible to participate in triennial FoF exercises.
- c. Several security service vendors provide MAF teams staffed by experienced personnel. These teams have demonstrated adherence to existing NRC CAF standards and credibility through successful performance in FoF exercises. Under our proposal, vendors qualified to supply MAF teams would have to meet the new performance-based standards and guidelines.

2. Sustainability/Risk

- a. To implement our recommended approach, many licensees would use existing fleet or site MAF teams that participate in tactical response drills and licensee-led FoF exercises. These teams must be maintained to meet the performance evaluation program requirements established by the NRC.
- b. Since each MAF team would have to meet a set of NRC-issued or -endorsed standards and guidelines for performance, they would be interchangeable (i.e., plug and play). This means that a licensee could readily compensate for the loss of a MAF team through the use of another team (e.g., if a vendor decides to exit the MAF team business, then the affected licensee could contract with another approved vendor or join an alliance).
- c. All issues related to sustainability/risk would be identified and addressed during development of MAF standards and guidelines.

3. Impact on Licensee Activities

- a. Our recommended approach produces the least impact to licensee activities, considering both short-term and long-term impacts, of all the options/alternatives discussed in the NRC public meeting of August 22, 2018.
- b. The main impacts would be marshalling the resources needed to engage the NRC on the development of performance-based standards and guidelines for MAF teams and supporting ongoing oversight activities to monitor adherence.

4. Knowledge Transfer

- a. Our recommended approach continues and broadens the opportunities for security personnel to be part of a MAF team during a triennial FoF exercise inspection and, therefore, maximizes knowledge transfer among industry members compared to other MAF options. Whether returning from an assignment on a fleet, alliance or vendor-sponsored team, ex-team members will be returning to their sites with valuable knowledge and experience that can be shared to improve the effectiveness of performance evaluation programs.
- b. The use of industry MAF teams will promote more accurate and timely sharing of FoF exercise operating experience across the industry.

5. Conflict of Interest

Note: The Energy Policy Act of 2005 requires the NRC to “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.”⁷ For this reason, the NRC prohibits officers in the adversary force from participating in exercises at their home plants.

⁷ [42 U.S. Code § 2210d](#)

- a. All issues related to conflict of interest would be identified and addressed during development of MAF standards and guidelines. For example, standards and guidance could require:
 - 1) No MAF team member can be based at the site receiving the triennial FoF exercise inspection.
 - 2) The NRC will select the exercise target sets, attack vectors and tactics, and related scenario events.
 - 3) The MAF team will perform under the direction an NRC inspection team leader and be under periodic observation by members of the NRC inspection team during the course of the exercise.
 - 4) Post-exercise documentation from each MAF team member stating whether they were/are aware of any conflict of interest issues. The documentation could be provided to the NRC shortly after completion of the exercise.
- b. NRC regulations allow licensees to develop and implement performance evaluation activities for Licensed Operators (exams) and Emergency Response Organizations (exercises). During these activities, licensee personnel administrating the evaluation must present off-normal or emergency conditions in a manner that is both realistic and does not call the validity of the evaluation into question (e.g., avoids prompting or supplying “leading” information). They must also adhere to scenario confidentiality requirements while developing and presenting the evaluation activity. To eliminate potential conflicts of interest, the licensee processes for conducting these activities include provisions for NRC oversight as required by NRC regulations and guidance. While acknowledging the differences between these activities and security force testing, the requirements for the use of industry MAF teams in FoF exercises could likewise build in NRC oversight to preclude potential conflict of interest issues.

6. Financial Impact

- a. When assessing the financial impact of NEI’s recommendation on licensees, the NRC should consider that licensees already maintain fleet or site MAF teams to participate in tactical response drills and licensee-led FoF exercises; therefore, it is not anticipated that the use of an existing MAF team in an FoF exercise would result in a significant cost over what is already being expended.
- b. The staff’s assessment of the financial impact of our recommendation should be based on a reasonable number of inspection hours and reflect that many licensees may elect to join an alliance of fleets and/or sites, an action that would likely result in costs savings.
- c. We believe our recommended approach produces the least financial impact to licensees, considering both short-term and long-term impacts, of all the options/alternatives discussed in the NRC public meeting of August 22, 2018. This conclusion is based on the expectation that the NRC and industry can align on a reasonable set of performance-based standards and guidelines, including provisions addressing independence and oversight.

7. Implementation

- a. The NRC is currently inspecting FoF exercises involving the NEI CAF and the Entergy and

- NextEra JCAF, so adding provisions to inspect exercises using a MAF team provided by another industry source should not entail significant changes to NRC inspection programs and procedures.
- b. Our recommended approach obviates the need to engage other Federal departments and agencies, or vendors, to establish or maintain an NRC MAF team.
 - c. NEI proposes that the revised approach to MAF teams be implemented on or about January 1, 2020, with the commencement of FoF exercise inspection cycle seven.
 - d. All issues related to implementation would be identified and addressed during development of MAF standards and guidelines. A detailed implementation schedule would also need to be created.

8. Oversight - Administrative and Operational

- a. It is anticipated that MAF team oversight provisions may include some combination of self-assessments, independent reviews, Quality Assurance surveillances and audits, and NRC inspections and audits. Documentation of an oversight activity performed by the licensee or an independent party would be required and retained for inspection, and identified issues would be entered into a corrective action system.
- b. NRC oversight of MAF teams could be based on a sampling approach to achieve reasonable assurance of acceptable performance. For example, the NRC could schedule observations of selected training and qualification activities over a 3-year FoF exercise cycle, such that portions of the training and qualifications of any individual team are reviewed at least once.
- c. All issues related to administrative and operational oversight would be identified and addressed during development of MAF standards and guidelines.