



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 7, 2005

MEMORANDUM TO: James H. Taylor, Sr. Security Specialist
Security Performance Evaluation Section
Office of Nuclear Security and Incident Response

FROM: Roy P. Zimmerman, Director *Roy P. Zimmerman*
Office of Nuclear Security and Incident Response

SUBJECT: DIFFERING PROFESSIONAL OPINION DECISION REGARDING
FORCE-ON-FORCE EVALUATION CRITERIA (DPO-2005-001)

The purpose of this memorandum is to provide the management decision for the Differing Professional Opinion (DPO) regarding the Force-on-Force (FOF) evaluation criteria that you submitted on January 6, 2005. In accordance with Management Directive 10.159, The Differing Professional Opinions Program, I appointed an Ad Hoc Review Panel on January 24 to conduct an independent review of your concerns. The panel met with you on January 27 and February 9 to obtain clarification on certain details of your concerns. The panel provided a concise summary of the concerns to you for your review and comment on February 21. The summary was discussed with you on several occasions and revised based upon your comments. A final summary of the concerns was approved by you on April 11, and is as follows:

In short, you contend that a win/lose paradigm is employed by the NRC in evaluating FOF exercises at power reactor facilities. You also contend that the win/lose approach is insufficient in that:

1. It does not adequately address relevant insights into licensee performance during the conduct of FOF exercises (i.e., is not performance-based);
2. Results derived from these win/lose criteria are not reliable and do not provide defensible results; and actions taken, or not taken, by the NRC and respective licensees due to these results may be detrimental to the public health and safety;
3. There are numerous artificialities, many of which are complex and significant, associated with these exercises and these artificialities routinely affect the outcome of the exercises. Most of the consequences resulting from these artificialities are known and can be adequately factored into the evaluation process. However, there are consequences created by some artificialities that evaluators are either unaware of or do not fully understand these consequences can be the determining factor in which side wins or loses an exercise;

4. The affect of drill artificialities on the final outcome (success or failure to protect the target set) of the FOF exercises is amplified in the win/lose paradigm.

Regardless of the criteria used, artificialities will always affect the outcome of these types of exercises. The number and type of artificialities, and the subsequent consequences relating to the bottom-line, remain the same regardless of the evaluation criteria used. However, performance based criteria that evaluate the capabilities of protective force attributes such as command and control, communications, tactics (individual and team), equipment, protection strategy, etc. along with other supporting protective systems are not reliant on the bottom-line results to obtain necessary and beneficial data. Using performance based criteria, evaluators are able to determine the effectiveness of these individual attributes regardless of who wins or loses the exercise. Evaluating these essential attributes provides evaluators with information pertaining to the protective force/systems' effectiveness which in turn provides a basis for determining whether the licensee has the necessary capabilities to adequately protect essential equipment.

5. It precludes adequate evaluations of "wins" to identify performance deficiencies and areas for improvement;
6. It provides no incentive to licensees to function in an open, legitimate manner and may provide motivation to manipulate their performance in an effort to "win."

The panel provided the results of their review on June 23, and revised their report on October 4 to provide clarification in consideration of comments provided by you on June 29, and myself on August 16. The panel concluded that certain aspects of your proposal have merit and, if applied, would allow the NRC to more reliably assess the capability of a protective force to execute an effective defensive strategy. The panel further concluded that a revised FOF program that retains the goal of protecting target sets and applies the performance assessment tools and techniques proposed by you is viable, comports with the principles of the NRC Revised Oversight Process (ROP), and would be more effective in both assessing and improving performance.

In reaching my decision, I reviewed the Panel's report, discussed the report with the-- Panel chair, and reviewed the additional comments you provided on the Panel's report on June 29. I also benefitted from our August 3 meeting with the Panel where we discussed the Panel's report. Based on this review, I agree with the conclusions of the panel. The panel provided six recommendations pertaining to your submission. My decisions regarding the recommendations, and the rationale for the decisions, are provided below.

The crux of the issues raised by the DPO, and the Panel report and its recommendations, are viewed to stem from the staff's varied understanding regarding what security force performance insights (primarily weaknesses) are appropriate to share with a licensee, particularly if a target

set is not destroyed during a FOF drill. This is not a criticism of the staff, but rather a call for management to clearly articulate expectations in accordance with the regulatory framework. You and the Panel members performed a valuable service in focusing attention on the need for clarity in this area.

Recommendation 1: Benchmark with other federal agencies (U.S. Department of Defense (DOD), and U.S. Department of Energy (DOE)) to gather insights, techniques and strategies for evaluating protective force performance during FOF exercises.

Decision: Agree with the recommendation. Staff will schedule, attend and document the results from benchmarking activities during observations of future DOD and DOE FOF exercises. The staff will specifically gather "best practice" insights, techniques and strategies for evaluating protective force performance, and incorporate into the NRC FOF program, as appropriate.

Rationale: The NRC FOF program has benefitted from familiarity with DOD and DOE FOF exercises. Former and current NRC staff have observed and participated in DOD and DOE FOF exercises. These interactions helped facilitate the enhancements to NRC FOF exercises which have been implemented over the last several years, making the drills more realistic and effective. For example, drill artificialities have been reduced through (1) the use of sophisticated Miles gear; (2) better trained, mock-adversaries (3) development of more sophisticated exercise scenarios, and (4) improved exercise controller performance. A program of this complexity will continue to mature, incorporating lessons learned and technological advances while remaining consistent with the regulatory basis for the exercise program. In order to stay abreast and incorporate "best practices" developed by federal partners, periodic observations of DOD and DOE FOF exercises are necessary for continued improvement.

Recommendation 2: Develop protective force performance attributes and evaluation criteria that should be used by FOF evaluators.

Decision: Agree with recommendation. Staff will evaluate existing protective force performance attributes and evaluation criteria and add specificity, as needed, to ensure that a rigorous evaluation is performed, regardless of whether a target set is destroyed.

Rationale: As background, the concept and practice of assessing the primary attributes of a site's protective strategy and security force (target sets, detection, delay, response tactics, security resources, command and control, and communications) have been part of the NRC's FOF process. At the end of each drill in the current FOF program, the NRC team leaders discuss these details with the inspection team, including: the specific results of the drill; whether or not targets (or target sets) were destroyed; response force performance; mock-adversary performance; the overall conduct of the drill; control and impact of any artificialities; and, effectiveness of other attributes of the site's protective strategy. As detailed in NRC inspection procedures, these insights are to be verbally communicated to the licensee in the daily team brief and formally summarized during the exit meeting. In addition to the formal inspection report documentation of the NRC's assessment of target sets, intrusion detection systems, response strategy, security force training and site resources, other attributes, such as tactics, command and control and communications are also documented when appropriate.

Notwithstanding the above, the thrust of the DPO and Panel recommendation is viewed as addressing the need for more detailed written evaluation criteria, thereby,

encouraging a more holistic assessment of security performance. Attributes and criteria from federal partners should be reviewed and incorporated in NRC FOF program, inspection procedures, assessment tools and guidance documents, as appropriate.

Recommendation 3: Incorporate protective force performance attributes and evaluation criteria into inspection procedures, assessment tools (including those for the Significance Determination Process (SDP) and the licensee feedback), and guidance documents. Document assessments in inspection reports.

Decision: Agree with the recommendation. See also response to Recommendation 2.

Recommendation 4: Develop a structured process to provide licensees FOF exercise feedback on protective force performance against the attributes and evaluation criteria identified.

Decision: Agree with the recommendation. The staff will review its existing process, and enhance it as necessary, to ensure that licensees are provided verbal and written FOF exercise feedback on protective force performance (beyond that of target set status), consistent with the ROP, the revision to the Significance Determination Process (SDP) implemented on July 25, 2005, and the attributes and evaluation criteria developed based on Recommendation 2.

Rationale: The ability to defend a target set against the Design Basis Threat provides the basis for the FOF program, including the SDP, similar to how probabilistic risk assessment provides the bases for much of the ROP SDP. As in the ROP, the decision regarding which issues are within the regulatory framework to discuss with the licensee and then document appropriately in inspection reports is based on the issue's significance. A performance issue could be a minor violation or an observation, which per NRC procedures is not documented in NRC inspection reports. However, some findings that did not precipitate the destruction of a target set should be documented in inspection reports because they are findings associated with other requirements. For example, such findings have included limitations in security officer training and target set development, and have been assessed in accordance with the baseline SDP and have been documented in inspection reports following FOF exercises. The SDPs used in conjunction with FOF program findings has been developed to accommodate exercise, process, and programmatic issues. Inspection guidance refers security issues, not related to the actual exercise, to the baseline inspection program for followup evaluation.

The current FOF inspection program has been designed to achieve uniform assessment consistent with regulatory requirements and standards. NRC staff comments on performance beyond NRC regulatory requirements and standards should align with the ROP criteria to reflect the progress the FOF program made and to avoid backsliding in an area it consciously evolved from since 2000. On the other hand, in accordance with the ROP criteria, the staff should not hesitate to verbally share its observations that do not rise to the level of more than minor with the licensee, even when the target set was adequately protected.

Recommendation 5: *Perform a job-task analysis for NRC FOF evaluators. Develop a more structured and specialized training and certification program (including refresher training) for all FOF evaluators.*

Decision: Agree with the recommendation. A more formal training and certification program is being established for security professionals, including FOF evaluators. The staff intends on leveraging existing DOE training resources.

Rationale: Similar to other NRC inspectors, FOF inspection staff develop most effectively through on-the-job training combined with internal and external security and regulatory experience. Currently, NRC FOF team leaders are required to complete a structured set of classroom and self-study activities and pass an oral qualification board in order to lead an exercise evaluation. The board focuses on ensuring that prospective team leaders have the requisite knowledge of security strategies and tactics, relevant NRC regulations, and inspection procedures and protocols. In order to achieve a consistently high level of inspection staff performance, a corresponding investment in staff training is appropriate.

Recommendation 6: *Employ a Communication Plan to reach out to internal and external stakeholders to develop a consistent understanding of the revised program.*

Decision: Agree with the recommendation. In order to balance work priorities and staff resources, a limited Communication Plan, will be developed to target specific areas of the revised program needing clarification. For example, this plan will emphasize that the NRC's evaluation of a FOF exercise goes beyond determining "win/lose" to assess the primary attributes of a site's protective strategy and security force (target sets, detection, delay, response tactics, security resources, command and control, and communications) will be included.

Rationale: Previous communication plans were developed as the program evolved. FOF is one of the more well documented NRC programs. A number of Agency documents describe the NRC's FOF program, including the widely distributed, Protecting Our Nation. Numerous internal and external stakeholders have observed exercises and provided feedback on the program including staff from: Congress; Government Accountability Office; NRC Office of the Inspector General; Department of Homeland Security; Federal Bureau of Investigation; State and local radiation, emergency preparedness and law enforcement officials; NRC Commissioners and their staffs; and senior NRC officials. The most important document for inspection staff will remain the inspection procedure itself.

Nonetheless, the Panel identified that as the FOF program has continued to evolve there is a need for the communication with internal and external stakeholders to keep pace. This is particularly worthwhile in the areas noted above where clarity is needed and additional FOF program staff training is planned.

I appreciate you having first brought your concerns up through your first and second line supervisors. I commend your willingness to subsequently use the Differing Professional Opinions Program. Your willingness to bring your concerns first to your management's attention, and then to mine through the DPO, contributed to the development of recommendations for enhancements to the FOF program. In accordance with Management Directive 10.159, The Differing Professional Opinions Program, a summary of the issue and its

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disposition will be included in the Weekly Information Report to advise interested employees of the outcome.

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