

January 22, 1999

FOR: The Commissioners

FROM: William D. Travers /s/  
Executive Director for Operations

SUBJECT: RECOMMENDATIONS OF THE SAFEGUARDS PERFORMANCE ASSESSMENT TASK FORCE (WITS 199800188)

## PURPOSE:

To advise the Commission of recommendations reached by the Safeguards Performance Assessment (SPA) Task Force for the evaluation of licensees' tactical response capability at nuclear power plants.

## BACKGROUND:

In June 1998, NRR recommended, and the Executive Council agreed, that the Operational Safeguards Response Evaluation (OSRE) program be eliminated by the end of Fiscal Year (FY) 1998. The goal of the OSRE program was to evaluate licensees' contingency response capability and interface between safety and safeguards (SECY-92-418, December 18, 1992). Another assessment program, Regional Assists, provides support to the regions for testing the performance of the licensees' perimeter intrusion detection and alarm assessment systems (also described in SECY-92-418), but it does not evaluate the licensee's ability to meet the design basis threat.

The OSRE program conducted site visits at nuclear power plants between 1991 and 1998 and observed force-on-force exercises conducted by the licensees. The program identified a number of minor weaknesses and some significant weaknesses in licensees' observed performance.<sup>(1)</sup> Corrective actions for those weaknesses were implemented; however, not all security plans were revised to incorporate these corrective actions, a step that would have made them regulatory commitments subject to later inspection and enforcement.

Eliminating the OSRE program in FY 1998 left 11 power plant sites unevaluated under OSRE. (A list of these sites appears in [Attachment 1.](#)) This step generated extensive attention and comments from the media and certain members of Congress, stemming in part from the perception that the OSRE program was the only mechanism that the Commission had in place to evaluate licensees' ability to counter terrorism.<sup>(2)</sup> Two differing professional views (DPVs) were filed by NRC Headquarters and regional safeguards staff members who objected to elimination of the OSRE program. A panel was convened to review these DPVs and the panel issued its report and recommendations on November 4, 1998 ([Attachment 2](#)).

The staff responded to numerous inquiries from the media and Congress and briefed the Chairman and certain Commissioners on the OSRE program. These briefings included a discussion of possible alternatives to the OSRE program to support NRC's future validation of licensees' tactical response capabilities. The Chairman instructed the staff to reinstate the OSRE program and to accelerate the efforts of the task force formed to review safeguards performance issues. The Chairman further instructed the task force to report its findings and recommendations to the Commission by the end of Calendar Year 1998.

The task force that was formed in October 1998, now called the Safeguards Performance Assessment (SPA) Task Force, studied the lessons learned from the OSRE program to develop recommendations for tactical response evaluations in the future. This paper summarizes the recommendations of the SPA Task Force.

## DISCUSSION:

[Section 73.55\(a\)](#) of Title 10 of the Code of Federal Regulations requires licensees to establish a physical protection system and a security organization with the objective of providing high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety. The physical protection system is required to protect against the design basis threat (DBT) of radiological sabotage (as defined in [10 CFR 73.1](#)) and to "include, but not necessarily be limited to, the capabilities to meet the specific requirements contained in paragraphs [73.55] (b) through (h)."

Licensees are required to develop physical security plans (PSPs) in accordance with [10 CFR 73.55\(a\)](#) to satisfy the requirements of [10 CFR 73.55\(a\)](#) and (b) through (h). These plans are submitted to the NRC for approval before implementation. Changes to approved PSPs that do not decrease the effectiveness of the plan can be made through [10 CFR 50.54\(p\)](#) and can be implemented without prior NRC approval; changes that do decrease the effectiveness of the plan are made under [10 CFR 50.90](#) and require NRC approval before implementation.

NRC's regional security inspections are designed to evaluate compliance with commitments made in approved PSPs and to assess the capabilities of the licensees' security programs. Although these commitments are intended to ensure that the security organizations are able to protect against the DBT, the inspections carried out to evaluate compliance with these commitments did not provide for performance testing of tactical response capabilities or evaluating the effectiveness of these commitments to protect against the DBT.

The OSRE program, which is performance-based, was designed to enhance regional inspection efforts by using force-on-force exercises conducted by licensees as a method of evaluating their response capabilities and it included the validation of licensees' target sets. A target set consists of interrelated equipment or a single component that if disabled or destroyed could prevent the reactor from being maintained in a safe condition. The OSRE team works with the licensee to reach a consensus on appropriate target sets. The scenarios are then given to the licensee's mock adversary force to carry

out during the exercises. NRC Headquarters and regional personnel, the NRC contractor, and the licensee's team of observers oversee the exercises and evaluate the performance of the security force. OSRE visits were conducted at 57 sites between 1991 and 1998. During these visits, OSRE teams identified weaknesses at 27 plants; some of these weaknesses related to failures to prevent mock adversary forces from gaining access to vital equipment. These weaknesses have been corrected by the licensees.

Licensees have always been responsible for identifying vulnerabilities in their programs, including security. However, licensees' ability to identify vulnerabilities in their tactical response capability has been enhanced by NRC's OSRE program. Although the end result was a higher confidence in the effectiveness of security programs throughout the industry, the SPA Task Force concludes that the industry can assume more responsibility for performance assessment of tactical response capability, thereby reducing the NRC's role in the assessment while preserving the same level of confidence in the final product.

To achieve this goal, the SPA Task Force recommends that:

1. The regulations be modified to require power reactor licensees to identify target sets, develop protective strategies, and exercise these strategies on a periodic basis. The exercises would be subject to NRC inspection and observation. The rulemaking would also consider regulatory changes necessary to require licensees to maintain the effectiveness of their contingency plans and to upgrade their security plan commitments whenever these exercises reveal weaknesses in their ability to protect against the design basis threat.
2. The staff develop a regulatory guide to outline the process for developing target sets and sabotage scenarios, as well as to detail acceptable means of conducting the exercises.
3. The staff develop changes to the existing inspection program and procedures to identify the inspector's role in observing tactical response exercises and documenting the findings. The NRC Enforcement Manual should be revised to describe actions to take as a result of inspection findings related to licensee-run exercises.
4. The staff consider developing a training module to enhance security inspector knowledge of tactical response exercises and abilities in carrying out the responsibilities of the new or revised inspection procedure(s).

All of these actions will be coordinated with the Nuclear Energy Institute, industry representatives, and other public stakeholders. The actions described in Item 3 above will be coordinated with the reactor oversight process improvements currently under development.

The SPA Task Force believes it is feasible to develop a schedule providing for a new rule to be published for public comment by the end of May 1999 and the attendant guidance and inspection procedure(s) be published in final form by the end of October 1999. Final resource and schedule estimates will be provided in the rulemaking plan that will be forwarded for Commission approval within 60 days of approval of the recommendations contained in this paper. The SPA Task Force recommends that OSRE visits continue while the rulemaking is underway and that the cycle of OSRE visits be allowed to conclude before any new program of performance assessment is implemented. However, if recommendations that emerge from this effort represent a significant departure from, or improvement to, the OSRE program, a more immediate shift to the new program may be warranted.

On December 11, 1998, Samuel J. Collins issued a Tasking Memorandum for Staff Followup on Differing Professional Views Regarding the Operational Safeguards Response Evaluation Program, to consider the recommendations of the DPV panel ([Attachment 3](#)). The recommendations of the DPV panel have been incorporated into the SPA Task Force recommendations, with one exception, viz., the Chairman's instruction to the staff to immediately reinstate the OSRE program superceded the panel's recommendation that the program be terminated pending resolution of other issues.

#### RECOMMENDATIONS:

That the Commission approve the SPA Task Force recommendations outlined in the Discussion section above and allow the staff to begin work on a rulemaking proposal that would address these recommendations.

#### COORDINATION:

The Office of the General Counsel has reviewed this recommendation and has no legal objections to its content.

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Attachments: As Stated

Clinton  
Comanche Peak  
Davis Besse  
Ginna  
Limerick  
Perry  
Quad Cities  
Seabrook  
St. Lucie  
Susquehanna  
Watts Bar

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1. Licensees were allowed to carry out the exercises during OSRE visits using more response force personnel, and sometimes additional equipment, than are committed to in the approved security plans. During future OSREs, licensees will be limited to the response force personnel and equipment that are specified in their security plan commitments.

2. The Differing Professional Views and media reports about the elimination of the OSRE program referred to it as a counter-terrorist and/or anti-terrorist program. In fact, the OSRE program was actually focused on the broader concept of radiological sabotage, in accordance with 10 CFR 73.1.