Fact Sheet on Force-on-Force Exercises at Nuclear Power Plants

The Nuclear Regulatory Commission (NRC), as part of its comprehensive security program, has regularly carried Force-on-Force exercises at operating nuclear power plants since 1991. Force-on-Force exercises are conducted and improve, as necessary, performance of defensive strategies at licensed facilities. These exercises have been intended to be a primary means to conduct performance-based testing of a licensee's security force and its abilit prevent radiological sabotage as required by NRC regulations (10 CFR Part 73). Force-on-Force exercises are als robust network of the NRC's security oversight program.

Prior to September 11, 2001, each of the 65 sites nationwide had an Operational Safeguards Response Evaluatic the NRC's term for the exercises, once every eight years. These exercises were conducted at approximately eigh year. Force-on-Force security exercises were suspended after the September 11 attacks because the conduct of exercises would have been a significant distraction to licensee security forces which were at NRC's highest level NRC security staff instead focused on strengthening and monitoring security improvements implemented by licer response to NRC advisories.

As part of the Commission's enhancements in its security programs since the September 11, 2001, terrorist atta York and Washington, D.C., the Commission has decided to conduct approximately 22 Force-on-Force exercises starting in fiscal year 2004, so that each site's security will have an exercise at least once every three years. In licensees will conduct a number of tactical response team security drills in the intervening period, consistent witl April 29, 2003 training Order.

The Commission decided in July 2002 to reinstate the table-top component of Force-on-Force exercises given th February 25, 2002 Order was almost fully implemented. These exercises include a wide array of Federal, State a law enforcement and emergency planning officials in addition to licensee and NRC personnel. In the table-top ex NRC security, emergency preparedness and operations specialists evaluate the effectiveness of licensee security against a series of attack scenarios at a mock-up of the facility. In general terms, the adversary force, for these is assumed to be well-trained and well-equipped. Table-top exercises were carried out at seven nuclear power pl between July and December 2002. These exercises evaluated the licensee security forces against enhanced adve capabilities consistent with the Commission's February 25, 2002 Order. The details of the enhanced adversary fc characteristics are Safeguards Information, available only to authorized individuals with a need to know. The dis Safeguards Information is subject to civil and criminal penalties under the Atomic Energy Act.

In February 2003, the Commission decided to establish an expanded Force-on-Force exercise pilot program. The exercise, which includes table-top and Force-on-Force exercises, is conducted over a period of several days. Firs security, emergency preparedness and operations specialists conduct table-top exercises in which they evaluate effectiveness of licensee security plans against a series of attack scenarios. The role of Federal, State, and local enforcement and emergency planning officials is also discussed in this phase of the exercise. Exercise coordinatc the number of defenders, their defensive positions and their defensive strategies. In the second phase, armed w information from the table-tops, and with information gathered prior to the table-tops, detailed plans are made number of commando-style attacks seeking to probe for potential deficiencies in the defensive strategy. A mock force carries out these attacks. The aim of the site's defenders is to keep the attackers from destroying or dama safety equipment.

New techniques and equipment will be used to conduct the full Force-on-Force exercises. Among the enhanceme tested is the use of Multiple Integrated Laser Equipment System (MILES), which was developed for the armed fo MILES equipment uses a laser to simulate bullets and is useful in realistically assessing hits and misses.

The NRC is planning to conduct over a dozen exercises in the pilot phase of the expanded Force-on-Force progra currently conducting about two per month. The adversary characteristics being exercised remain those of the Fe 2002 Order until the revised design basis threat (DBT), which the Commission ordered on April 29, 2003, is fully implemented on October 29, 2004. However, the staff will exercise elements of the April 29, 2003 DBT to the ex licensee has already amended its protective strategy to defend against those elements.

The NRC notifies licensees in advance of Force-on-Force exercises for safety and logistical purposes and to provi adequate planning time for coordination of the efforts of two sets of security officers – one for maintaining actua another for participating in the exercise. In addition, arrangements must be made for a group of individuals who control and monitor the exercise. A key goal is to balance personnel safety, while maintaining actual plant securi the exercise, with enhanced realism by reducing artificialities.

The NRC ensures that any potentially significant deficiencies in the defensive strategy identified during the pilot Force-on-Force exercises are promptly reviewed, and properly addressed.

The ongoing pilot program is focused on identifying elements of the Force-on-Force process that should be impr When the pilot program is completed and evaluated, a new program of Force-on-Force exercises will be establis NRC. Results of the expanded Force-on-Force exercises pilot program are expected to help the NRC:

- Determine the performance-based components of the exercise, including hardware, procedures and artific
- Gauge the effectiveness of enhanced security measures at nuclear power plants against enhanced adversa characteristics;
- Establish interaction protocols with other Federal, State and local law enforcement agencies likely to be in the overall protection of nuclear power plants;
- Design a program for full implementation of Force-on-Force exercises.

The Force-on-Force exercises have been and are intended to be a primary means to conduct performance-based a licensee's security force and its ability to prevent radiological sabotage. However, they represent only one asp assessing compliance with NRC security requirements. The NRC's security oversight program provides an overall assessment of plant security.

See also: Frequently Asked Questions about Force-On-Force Security Exercises at Nuclear Power Plants.

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Frequently Asked Questions About Force-On-Force Security Exerc at Nuclear Power Plants

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Question: What is a Force-on-Force exercise? How does it help ensure security at a nuclear power pl

Answer: A Force-on-Force exercise, as conducted in the expanded pilot Force-on-Force program, employs a two- approach and is conducted over a period of several days. First, NRC security, emergency preparedness and oper specialists conduct table-top exercises on a mock-up of the facility. During this phase they evaluate the effective licensee security plans against a series of attack scenarios. Exercise coordinators learn the number of defenders, defensive positions and their defensive strategy. The role of State, local and Federal law enforcement and emerg planning officials is also discussed in the enhanced table-top exercises.

Second, armed with information from the table-top exercises, and with information gathered prior to conducting table-top exercises, detailed plans are made for a number of commando-style attacks seeking to probe potential deficiencies in the defensive strategy. A mock adversary force carries out these attacks. The adversary force atte reach and destroy enough safety equipment to set in motion an accident which would damage the reactor's core fuel pool and potentially cause a release of radiation to the environment. The power reactor's security force seek interdict the adversary force and prevent them from reaching the safety equipment.

During Force-on-Force exercises the licensee maintains both its normal security force, not involved in the exerci second security force which actually participates in the exercise. The use of weapons and explosives is simulated electronic gear and other means.

The purpose of these exercises is to identify any significant deficiencies in the defensive strategy in the licensee' plan that need correcting. Any such deficiencies are promptly reviewed, and properly addressed. These exercises the most realistic evaluation of the proficiency of the licensee security force, short of an actual terrorist attack.

The model of using Force-on-Force exercises to evaluate the proficiency of security units is based in part on the of the U.S. military. All branches of armed services routinely engage in Force-on-Force exercises, some quite lar Weaknesses identified in those exercises are corrected and permit the U.S. military to retain their preeminent pc among militaries around the globe.

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Question: How do these expanded exercises improve security at nuclear facilities?

Answer: These exercises provide a realistic evaluation of the proficiency of licensee security forces against an ex threat consistent with the Commission's February 25, 2002 Order. The purpose of these exercises is to identify a deficiencies in the defensive strategy in the licensee's security plan that need correcting. Any such deficiencies a promptly reviewed, and properly addressed. These exercises also help NRC continue to improve its testing progr

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Question: Why weren't these security exercises conducted between September 2001 and February 2

Answer: Following September 11, 2001, NRC Force-on-Force exercise activities were suspended because the cor such exercises would have been a significant distraction to licensee security forces which were at NRC's highest l alert. Moreover, NRC would not have had the resources to conduct the exercises because NRC security personne engaged in helping to staff NRC's emergency response centers, in developing detailed advisories and Orders for licensees and in monitoring and evaluating the licensees' heightened security postures, including weekly reports reactor licensee physical security resources and program enhancements.

This was a period in which both licensee and NRC resources were stretched to their limits, significant enhanceme underway, and it would have been imprudent to try to conduct exercises in that environment. Force-on-Force ex be effective, need to be well prepared. The licensee needs to be able to staff both its normal security force and t complete second security force without driving overtime usage to unacceptable levels. The NRC staff needs to as advance potential deficiencies in the defensive strategy at a site and choose the exercise scenarios which are mc identify potential weaknesses. Until earlier this year, neither NRC nor licensees had the margin of resources nece carry out a well-prepared exercise program in the heightened threat environment. NRC and licensees now have t resources and in February NRC resumed this important activity after having conducted less resource-intensive e table-top exercises at seven sites last summer and fall.

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Question: Which specific licensees will be involved in Force-on-Force exercises?

Answer: The Commission has determined that activities associated with these exercises are sensitive, non-public information. Therefore, the sites involved in these exercises will not be made public at this time, with the except Indian Point Energy Center.

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Question: Are there any specific reasons for the plants that were chosen for the resumption of Force exercises? Have they been determined to be unsafe or vulnerable to terrorist attacks? What is uniqu them?

Answer: The plants that are participating in the resumption of the Force-on-Force exercises volunteered to be in this pilot program. They were not selected because they were unsafe or more vulnerable to terrorist attack.

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Question: Following completion of the pilot program, will these Force-on-Force exercises be conduct power reactor sites? If so, how often?

Answer: The Commission has decided that Force-on-Force exercises will be carried out in the future at each nucl plant site on a three-year cycle.

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Question: Has the NRC been in contact with the FBI and other Federal law enforcement authorities o resumption of exercises at these particular plants?

Answer: Yes, the NRC has been in contact with the FBI and other Federal law enforcement authorities on the pilc Force-on-Force exercises. Some local FBI offices observe these exercises.

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Question: What other Federal agencies are involved in the resumption of these exercises? Is the Dep of Homeland Security (DHS) directly involved? Have law enforcement and Intelligence agencies beer on these exercises?

Answer: Currently, the FBI and DHS are the Federal agencies invited to participate in the expanded Force-on-Fo exercises. Intelligence agencies are not expected to participate directly at this time. Lead local law enforcement representatives from the respective States are also invited to participate or observe.

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Question: Do any other regulatory agencies conduct Force-on-Force exercises?

Answer: The NRC is not aware of any other Federal regulatory agency that conducts Force-on-Force exercises at sector facilities. However, the Department of Energy and the Department of Defense both use the Force-on-Forc evaluate the proficiency of security systems.

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Question: While the NRC's Force-on-Force program was suspended, were there no such exercises be conducted at power reactors sites?

Answer: In general, licensees have been conducting their own such exercises as part of the security force trainin validation of updated security plans. The Commission's April 29, 2003 training Order includes enhancements in li training programs, the details of which are Safeguards Information.

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Question: Are these exercises tough enough in the post-September 11 environment?

Answer: Yes, the NRC is using expanded adversary characteristics which go beyond the pre-September 11 Desig Threat (DBT) for radiological sabotage. Scenarios developed from these characteristics by NRC staff are realistic, challenging and representative of an enhanced threat consistent with the Commission's February 25, 2002 Orde reactor licensees. Simultaneously, the NRC is in the early transition stage between the February 25, 2002 Order imposed Interim Compensatory Measures and the April 29, 2003 Order that imposed the revised DBT for radiolo sabotage. At the conclusion of the transition period, the final revised DBT will be used as the basis for adversary characteristics in Force-on-Force security exercises to allow licensees to further enhance their security plans to c that threat.

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Question: Isn't it true that, despite your best effort, no exercise can fully prepare a nuclear power pl actual terrorist attack?

Answer: A well-developed security program, a skilled security force, a strong training program, and periodic exe (such as the pilot Force-on-Force exercises) to test, adjust, and improve upon the security of a nuclear facility ai expected to prepare a licensee for a terrorist attack equivalent to the DBT.

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Question: Explain in plain English what the OSRE program is and its connection to the resumption of Force-on-Force exercises?

Answer: The Operational Safeguards Response Evaluation (OSRE) program was developed by the NRC as an insp to assess power reactor licensees' protective strategies and capabilities against the DBT for radiological sabotag in 1991 as a performance-based program, an OSRE consisted of analysis of safety equipment, table-top drills, sa evaluations, and Force-on-Force exercises. Through its findings and corrective actions, the OSRE program sough and bolster the protection of public health and safety from radiological sabotage. These pilot Force-on-Force exe a similar goal.