

Force-on-Force Security Inspections

Security is a priority for the NRC - it is one of our strategic goals. Force-on-Force (FOF) inspections are an essential part of NRC's oversight of nuclear power plant security programs. After Sept. 11, the NRC upgraded security forces at nuclear facilities around the country. To test the security forces, the NRC implemented a more robust FOF inspection program.

The Nuclear Regulatory Commission has carried out FOF inspections regularly at commercial operating nuclear power plants since 1991 as part of its comprehensive security program. These inspections are an important way to evaluate and improve the effectiveness of plant security programs under NRC regulations (10 CFR Part 73) to prevent radiological sabotage.

FOF inspections assess a nuclear plant's physical protection measures to defend against the "design basis threat," or DBT. The DBT describes an adversary that plant owners must protect against with physical protection systems and response strategies. The NRC periodically reassesses the DBT and makes revisions as necessary.



A New, Stronger Force-on-Force Program

Before Sept. 11, 2001, NRC conducted FOF inspections about once every eight years at all U.S. nuclear plant sites, in addition to regular baseline security inspections. Following the Sept. 11 attacks, the NRC strengthened its FOF program, requiring plants to defend against a tougher DBT that reflected the new threat environment.

The NRC's redesigned FOF program was fully implemented by late 2004. Now, the NRC evaluates each plant site once every three years. All licensees conduct tactical security exercises in the intervening years. (The details of the FOF inspections are Safeguards Information, which is protected from public disclosure under the Atomic Energy Act.)

The program uses the supplemented DBT and greatly increases the level of realism, while ensuring the safety of plant employees and the public. NRC gives plant operators advance notice of FOF inspections for safety and logistical purposes and to provide for coordination of two sets of security officers — one for maintaining actual security, another for participating in the inspection. A key goal is to balance personnel safety, while maintaining actual plant security during exercises that are as realistic as possible.



Inspectors preparing FOF exercises use information from table-top drills, previous inspection reports and security plan reviews to design a number of commando-style attacks to probe potential weaknesses in the plant's defenses. The site's defenders aim to keep the attackers from destroying or damaging key equipment. Any potentially significant weaknesses in the protective strategy identified during FOF inspections are promptly addressed.

FOF inspection teams include active duty military advisors from the U.S. Special Operations Command. They help evaluate site security forces and systems, and provide an independent evaluation of the adversary force's performance.

NRC's force-on-force security inspections realistically test security forces' capability and security programs at nuclear power plants.

- *The NRC requires nuclear power plant operators to defend the plant against attackers seeking to damage the reactor core or spent fuel and cause a radiation release.*
- *During each FOF inspection, a number of commando-style attack exercises are carried out against a plant's security forces to test the plant operator's protective strategy.*
- *Any significant problems are promptly addressed.*
- *Each nuclear power plant site has at least one FOF inspection every three years.*
- *The NRC and plant operator ensure the safety of plant employees and the security of the plant during FOF exercises.*

Composite Adversary Force

A credible, well-trained, and consistent mock adversary force is vital to the FOF program. Prior to Sept. 11, power plant operators used adversary teams that often included security officers from their own sites, other licensees, and state police tactical team members. Using these diverse sources caused inconsistencies in the capabilities of the adversary team.

The revised FOF program uses a Composite Adversary Force (CAF) specifically trained to NRC standards. The CAF is a significant improvement over the previous mock “attack” forces.

NRC standards for the CAF cover the skills and physical fitness qualifications of team members; team tactics, communications and planning; firearms knowledge and proficiency; and exercise simulation equipment.

The CAF is managed by G4S, a company that provides security for a number of U.S. nuclear power plants and is well-versed in security operations. To avoid any conflict of interest, the NRC requires a clear separation of functions between the CAF and plant security forces. The NRC also maintains control over the design and implementation of the FOF inspections.

NRC’s Overall Security Program

FOF inspections are an essential part of NRC’s oversight of plant owners’ security programs and their compliance with NRC security requirements. The agency continues to evaluate and strengthen its overall security program in response to changes in the threat environment, technological advancements and lessons learned. As a result, substantial improvements to nuclear plant security have been made to protect against terrorism and radiological sabotage. These include well-trained security forces, robust physical barriers, intrusion detection systems, surveillance systems and plant access controls.

Together, these efforts help make nuclear power plants among the best protected private sector facilities in the nation.

Additional information is available on NRC’s website at www.nrc.gov/security.html. Other security backgrounders include:

- Dirty Bombs
- Nuclear Security Enhancements Since 9/11
- Safety and Security Improvements at Nuclear Plants

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