GAO REPORT

Can plants defend against DBT? Too early to say . . .

Nuclear plants have upgraded security, but the NRC needs to improve the process for revising the DBT.

AFTER THE TERRORIST attacks of September 11, 2001, the Nuclear Regulatory Commission revised the design basis threat (DBT) for nuclear power plants, using a process that was "generally logical and well-defined," according to Jim Wells, director of the Natural Resources and Environment section of the federal Government Accountability Office (GAO). Testifying before the House Government Reform Committee's Subcommittee on National Security, Emerging Threats and International Relations on April 4, Wells introduced a report prepared by the GAO titled *Plants Have Upgraded Security, but the Nuclear Regulatory Commission Needs to Improve Its Process for Revising the Design Basis Threat* (GAO-06-555T). The DBT describes the threat that plants must be prepared to defend against in terms of the number of attackers and their training, weapons, and tactics.

Wells also revealed during testimony that although plant security has been upgraded, it is too early to conclude that all plants are capable of defending against the DBT. This is because, as of March 30, the NRC had conducted force-on-force exercises at only 27—or less than half—of the 65 plant sites in the United States.

Wells explained that following 9/11, the NRC's "threat assessment" staff made recommendations to the NRC commissioners for DBT changes based on an analysis of demonstrated terrorist capabilities. To enhance the predictability and consistency of its recommendations, the staff developed a screening tool to analyze intelligence information and to evaluate particular terrorist capabilities, or "adversary characteristics," for inclusion in the DBT. The revised DBT that resulted from the analysis and recommendations requires plants to defend against a larger terrorist threat, including a larger number of attackers, a refined and expanded list of weapons, and an increase in the maximum size of a vehicle bomb.

Wells noted that the new DBT generally corresponds to the threat assessment staff's recommendations, but not always. "For example," he said, "the maximum number of attackers in the revised DBT is based, in part, on the staff's analysis of the size of terrorist cells worldwide. However, for other important elements of the DBT, such as the weapons that attackers could use against a plant, the final version of the revised DBT does not correspond to the staff's original recommendations."

A nuclear power plant's bullet-proof guard post, one of the many security upgrades undertaken by the industry since 9/11. (Photo: NRC)

Two principal reasons were identified for these differences, according to Wells:

- First, the staff made changes to its initial recommendations after obtaining feedback from NRC stakeholders, including the nuclear industry, on a draft of the DBT. "A number of the changes reflected industry objections to the draft," he said, adding that "following meetings with industry [representatives], the staff decided not to recommend including certain weapons in the list of adversary characteristics that nuclear plants should be prepared to defend against." In its comments, the industry had pressed for the NRC to remove such adversary characteristics from the draft DBT because, he said, the industry considered them to be prohibitively expensive to defend against or to be representative of an enemy of the United States, which is the responsibility of the government, rather than the industry, to defend against.

Wells testified that NRC officials had told GAO researchers tasked with collecting information for the GAO report that the changes resulted from further analysis of

the intelligence data and the reasonableness of required defensive measures, rather than the industry's objections. "Nevertheless," he said, "this situation created the appearance that changes were made based on what industry considered reasonable and feasible to defend against, rather than an assessment of the terrorist threat."

■ Second, in deciding on the revised DBT, the NRC commissioners largely supported the staff's recommendations but made some significant changes, according to Wells. These changes reflected their policy judgments on what is reasonable for a private security force to defend against. "However, the commissioners did not identify explicit criteria for what is and what is not reasonable for a private security force to defend against, such as the cost of defending against particular adversary characteristics," Wells said. "For example, the commissioners decided against including two weapons that the threat assessment staff had concluded could plausibly be used against a U.S. nuclear power plant. Furthermore, instead of providing a reason for its decision to remove these weapons, the commission's voting record showed that individual commissioners used differing criteria and emphasized different factors, such as cost or practicality of defensive measures. We believe the absence of reviewable criteria reduced the transparency of the decision-making process. The absence of criteria also potentially reduced the rigor of the decision-making process."

Plant visits

Wells said that the plants visited by GAO researchers displayed security upgrades that included additional security barriers and detection equipment, bulletproof guard structures, new protective strategies, enhanced access control, and additional security guards. In some cases, he noted, the plants went beyond what the NRC required. For example, one site added electronic intrusion detection equipment to its outer perimeter, which was not required by the NRC. He added that the plants have generally performed well during force-on-force inspections, according to the NRC (even though less than half have participated in inspections), and that the results of baseline inspections showed that the sites have generally complied with their security plans.

Problems remain, however. A number of sites have not always met security requirements, Wells said. Most notably, the GAO researchers "observed a force-on-force inspection at a site in which the licensee's performance at the time was at best questionable in its ability to defend against the DBT," he said.

Force-on-force improvements

The NRC has made a number of improvements to its force-on-force inspection program, Wells noted. For example, the agency is implementing a schedule to conduct the inspections more frequently at each site—once every three years rather than every eight years—and has instituted measures to make the inspections more realistic, such as using laser equipment to better simulate the weapons that attackers and security guards would likely employ during an actual attack on a nuclear plant.

Wells said that the inspections have the ability to detect weaknesses in a plant's protective strategies, which can then be corrected. Nevertheless, he said, in observing three inspections and discussing the program with NRC officials, GAO researchers noted issues in the force-on-force program that warrant continued attention.

GAO recommendations

The report included two recommendations to address shortcomings in the process the NRC used to revise the DBT. First, the NRC should assign responsibility for obtaining stakeholder feedback on proposed changes to the DBT to an NRC office other than the threat assessment staff, thereby insulating the staff and mitigating the appearance of undue industry influence on the process.

Second, the NRC should develop explicit criteria to guide the commissioners in their deliberations to approve changes to the DBT. These criteria should include setting out the specific factors and how they will be weighed in deciding what is reasonable for a private guard force to defend against. In addition, the GAO recommended that the NRC continue to evaluate and implement measures to further strengthen the force-on-force inspection program.

The report is available on the GAO's Web site at <www.gao.gov/cgi-bin/getrpt?GAO-06-555T>.