

STATEMENT SUBMITTED
BY THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

TO THE
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS
COMMITTEE ON ENERGY AND COMMERCE
UNITED STATES HOUSE OF REPRESENTATIVES

CONCERNING

NUCLEAR SECURITY

SUBMITTED BY
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CHAIRMAN

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Mr. Chairman and Members of the Subcommittee, I am pleased to appear before you on behalf of the United States Nuclear Regulatory Commission (NRC) to discuss our safeguards and security programs. I intend to provide you a brief unclassified update on our major accomplishments since the Commission last testified before you on April 11 of last year. We look forward to going into more details in today's hearing.

I know the Subcommittee is very familiar with our safeguards and security programs, not just because of your hearings on December 5, 2001 and April 11, 2002, but also because of correspondence with the Commission, including my September 5, 2002 letter. As we have discussed previously, the NRC required its licensees to have the most robust safeguards and security programs of any element of the critical civilian infrastructure even prior to September 11, 2001. Those baseline programs for nuclear power plants included hardened facilities protected by closely regulated private guard forces, force-on-force exercises to test the effectiveness of security plans, background checks and fitness-for-duty programs for all personnel with access to the protected areas, and a three-tier threat advisory system. However we also recognized the need for changes in our baseline safeguards and security programs in light of the events of September 11, 2001, and therefore we initiated a comprehensive review of those programs in October 2001.

Last April, I discussed some of the early results of that comprehensive review, including our February 25, 2002 Order to licensees of operating nuclear reactors establishing a series of interim compensatory measures to cope with a threat larger than the pre-September 11, 2001 design basis threat, a March 25, 2002 Order to the licensee of the one uranium conversion facility, improvements then underway in our personnel access authorization program, plans for issuance of Orders to other classes of licensees, and the establishment of the Office of Nuclear Security

and Incident Response and the significant increase in staffing planned for that office. All of these efforts were being carried out in close coordination with the Office of Homeland Security, now the Department of Homeland Security, and Federal law enforcement and intelligence agencies.

Today, I can report significant further results from our comprehensive review. We have issued Orders to enhance security for additional classes of licensees, including Category I and Category III fuel cycle facilities, decommissioning reactors, gaseous diffusion enrichment facilities, independent spent fuel storage facilities, and transporters of spent nuclear fuel. Confirmatory Action Letters (CALs) have been issued to non-power research reactors operating at greater than 2 megawatts, and CALs are being processed for all other non-power reactors. An Order will soon be issued for licensees of large panoramic irradiators. We have issued a five-tier threat advisory system for each of these classes of licensees consistent with Homeland Security Presidential Directive 3 (HSPD-3). We have exercised this new system on two occasions consistent with the Attorney General's determination that the Nation was at a High or Orange threat level. We have also issued Orders to power reactor licensees to enhance personnel access authorization controls and we are preparing Orders that will address security guard force fatigue concerns and enhance security officer training and qualification standards.

Design Basis Threats

We have made progress in revising our Design Basis Threats (DBTs). Security programs at certain NRC-licensed facilities, including nuclear power reactors and Category I fuel cycle facilities, are designed to protect against specified threats that are termed the Design Basis Threats (DBTs). The DBTs characterize the adversary force composition and characteristics

against which certain NRC licensees (power reactors and category I fuel cycle facilities) must design their physical protection systems and response strategies.

Since the inception of the DBT as an aspect of the NRC's regulatory program, the staff has periodically assessed the threat environment and reviewed the adequacy of the DBTs in close coordination with the national intelligence community and law enforcement agencies. As I indicated last year, after the terrorist events of September 11, 2001, the NRC initiated a comprehensive re-examination of all of the basic threat assumptions underlying the current civilian nuclear facility security programs, including the DBT for radiological sabotage and the DBT for theft and diversion of special nuclear material. Our February 25, 2002, Order effectively made interim changes in the pre-September 11 design basis threat in that the Orders provided protection capabilities adequate to defend against an increased threat scenario, i.e., a de facto DBT was established by the Orders. When we resumed our security exercises with reactor licensees last summer by carrying out table-top exercises, which I will discuss in more detail later, we used enhanced adversary characteristics consistent with the February 25, 2002 Order. On January 2, 2003, the NRC staff solicited comments from other Federal agencies, cleared State officials, and cleared industry stakeholders on a proposed staff revision to the DBTs. The staff specifically asked for comments on the appropriate limits on the threats against which a private sector security force can reasonably be expected to defend. The comment periods on those proposed changes have now ended and the staff received detailed comments from many cleared stakeholders. Those comments are being evaluated and final staff recommendations will be available for Commission review in the very near future.

I know that this Committee is very interested in the issue of where the line should be drawn between the DBTs, for which licensees are responsible, and beyond-DBT threats for which responsibility is shared with Federal, State and local law enforcement and military assets. We look forward to discussing this issue in response to your questions today.

Airborne Threat

Many questions have been raised regarding power reactor vulnerabilities to intentional malevolent use of commercial aircraft in suicidal attacks and the potential effects on public health and safety. Although the design of many nuclear power plants considered the probability of accidental aircraft crashes that may pose undue risk to public health and safety, only a few plants were specifically designed to withstand an accidental impact.

Nonetheless, it should be recognized that nuclear facilities are among the most hardened industrial facilities in the United States and are massive structures with thick exterior walls and interior barriers of reinforced concrete which are designed to withstand tornadoes (and missiles generated by tornadoes), hurricanes, fires, floods, and earthquakes. In addition, the defense-in-depth philosophy used in nuclear facility design means that plants have redundant and diverse systems in order to ensure safety. This robust design philosophy provides the operators a capability to respond to events of all types, including aircraft attack. It is equally important to note that operators are trained to respond to emergencies of all types.

The Commission has directed licensees to develop specific plans and strategies to respond to an event that results in damage to large areas of their plants from explosions or fire. In

addition, mitigative measures required by the previously mentioned Orders include assuring the Emergency Plan staffing and associated resources are available to respond to such an event.

The Commission is of the view that the efforts associated with enhancing security at airports and on airplanes themselves are an important part of reducing the threat from malevolent use of commercial aircraft for all civilian infrastructure, most of which does not have the robust capacity of a nuclear power plant. The NRC supports the steps taken to improve aircraft security, including enhanced passenger and baggage screening, strengthening of cockpit doors, the Air Marshal program and the federal flight deck officer program under the Arming Pilots Against Terrorism Act. The U.S. intelligence community and various Federal law enforcement agencies have also increased efforts to identify potential terrorists and prevent potential attacks before they occur. For example, the Federal Aviation Administration (FAA) and Department of Defense (DOD) have acted to protect airspace above nuclear power plants from threats -- threats that were later judged to be non-credible.

The FAA and DOD also concluded that a Notice To Airmen (NOTAM) was an appropriate means to help control the air space above sensitive sites. The FAA has recently issued a revised NOTAM advising pilots to avoid the airspace above or in proximity to all nuclear power plants and not to circle or loiter in the vicinity of such facilities. The NOTAM advises that pilots who do so can expect to be interviewed by law enforcement authorities at their destination airport and potentially have their names added to the Transportation Security Administration incident reporting system.

The NRC is also continuing a major classified research and engineering effort, in conjunction with national laboratories, to evaluate the vulnerabilities and potential effects of a large commercial aircraft impacting a nuclear power plant. This effort includes consideration of reasonable additional preventive or mitigative measures to enhance protection of public health and safety in the event of a deliberate aircraft crash into a nuclear power plant or spent fuel storage facility.

Security Exercises

As I mentioned previously, last summer we resumed security exercises at operating nuclear reactors. The first seven such exercises were table-top exercises, which for the first time involved a wide array of Federal, State, and local law enforcement and emergency planning officials. Enhanced adversary characteristics, consistent with the February 25, 2002 Order were tested. We believe that such table-top security exercises were an appropriate step toward full-scale resumption of force-on-force testing.

In February 2003, we resumed force-on-force testing evaluations of security performance at power reactor facilities. We had temporarily suspended these evaluations following the terrorist attacks of September 11, 2001, because security resources were diverted to staff response centers, to assess threat conditions, and to implement a heightened security posture at licensee sites. In light of the security enhancements that have been made over the past seventeen months, the Commission considers it prudent to resume force-on-force exercise evaluations at this time using the enhanced interim threat capabilities contained in the February 25, 2002 Orders. Following a pilot program phase at an estimated fifteen sites at a pace of about two exercises per

month, we will be conducting comprehensive security performance reviews -- including enhanced force-on-force exercises -- at each nuclear power plant on a three-year cycle, instead of the eight-year cycle that had been applied in the past. We have requested funds for this activity in our fiscal year 2004 budget and are staffing up to meet this challenge. An important component of these reviews include enhanced "table-top" exercises (facilitated discussions using credible scenarios) that, as I mentioned previously, now involve a wide array of Federal, State, and local law enforcement and emergency planning officials. The pilot force-on-force exercises will transition to full security performance reviews after the Commission has approved and implemented a revised design basis threat. We believe that resumption of force-on-force testing will further improve both licensees' security capabilities and NRC's regulatory oversight processes.

Security Guard Training and Fatigue

We are also working to develop Orders to enhance the training requirements of security guards at nuclear reactor sites, especially in the area of tactical response. The enhanced requirements are guided, in part, by a review of training requirements used by other organizations, including State and local law enforcement agencies, the Department of Energy, the Department of the Navy and other federal law enforcement agencies.

Orders concerning fatigue of security officers at nuclear reactor facilities are under final consideration. Security officers at some sites have had to work long hours. This Order will establish detailed requirements on the maximum number of hours that security forces may work and will require rest periods. Stakeholders have been an integral part of the process.

Personnel Access Authorization

The NRC's comprehensive security program re-evaluation includes an assessment of the personnel access authorization requirements and programs at nuclear power facilities. This effort is intended, in part, to address heightened concerns pertaining to potential insider threats.

NRC regulations in place prior to September 11, 2001, required that an individual having unescorted access to nuclear power plants undergo a background investigation to verify the individual's true identity and to develop information about the person's background. The examination includes investigation of the individual's employment history, education history, credit history, military service, and character and reputation, as well as a psychological assessment to evaluate trustworthiness and reliability. The background investigation also includes a criminal history check conducted by the Federal Bureau of Investigations (FBI) on the basis of the applicant's fingerprints. In addition, employees are subject to behavioral monitoring once on the job and are subject to fitness-for-duty requirements, which include random drug and alcohol testing. Further, those who enter the protected area pass through portal monitors designed to detect weapons or explosives.

To supplement these stringent requirements, we took additional steps after September 11, 2001. First, the NRC, in coordination with licensees and the FBI, re-checked all licensee personnel with unescorted access to nuclear power facilities against the FBI watch list established as part of the investigation of the events of September 11. Additionally, the NRC is coordinating with the Immigration and Naturalization Service (INS) in the INS's effort to validate the employment eligibility of employees at nuclear power plants. This activity is continuing.

The NRC also issued Orders to nuclear power plants requiring that licensees enhance their access authorization programs. Among these measures are the elimination of temporary unescorted access to a facility, except under extraordinary circumstances. Another is the re-verification of background investigation criteria for those individuals with unescorted access to reactor facilities and a requirement that licensees share critical background investigations with other licensees to ensure that individuals denied access to one facility cannot subsequently gain access to a different facility. The NRC has also coordinated with intelligence and law enforcement agencies to strengthen the background verification process for nuclear reactor facilities. We intend to issue similar Orders to other NRC licensed facilities.

Radiological Dispersal Devices (“Dirty Bombs”)

Let me now turn to an issue that I know is important to the Committee, namely the malevolent use of radioactive material in an RDD. As you are aware, a radiological dispersal device (RDD) is a conventional explosive or bomb containing radioactive material that could be used to spread radioactive contamination. It does not involve a nuclear explosion. In fact, these devices would be unlikely to cause serious health effects beyond those caused by the detonation of conventional explosives. However, an RDD could potentially have a significant psychological impact, by causing fear, panic, and disruption. Some use of RDDs could result in radioactive contamination of an area of a city, up to several city blocks, with levels of contamination that would require cleanup.

Secretary Abraham and I are working closely to enhance the physical protection of high-risk sources, both at home and abroad. Internationally, Secretary Abraham and I have just

returned from a Conference sponsored by the Department of Energy and the International Atomic Energy Agency, and attended by over 100 nations. That conference discussed key issues relating to the security of high-risk sources and the actions which must be taken world-wide to improve the protection of these sources. The thrust of this activity is to establish stringent controls on those sources that present the highest risk if used by a terrorist in an RDD.

Domestically, Secretary Abraham and I are also working to strengthen the U.S. regulatory infrastructure to increase the protection of the high-risk radioactive sources which could be useful in an RDD. The Commission and the Secretary were recently presented with the results of a joint DOE/NRC working group set up specifically to study this issue. The working group determined the types and quantities of isotopes which are of greatest concern from an RDD perspective (also referred to as high-risk sources). The working group also outlined actions to increase the regulatory oversight of these sources and prevent ready access to these sources by terrorists. Elements of this system will include: verification of the legitimacy of the applicants for licenses; requirements governing the security of high risk sources while in transit, in storage, and in use; controls on access to sources to prevent diversion by an insider; requirements for tracking and inventorying of high-risk sources to ensure that the source has not been lost or stolen; export and import controls on high-risk sources; and more frequent inspections to verify the adequacy of the regulatory controls, and measures to ensure safe disposal. In short we are striving to establish cradle-to-grave security for these high-risk sources.

CONCLUSION

In closing, the events of September 11 have had, and continue to have, a significant impact on both the NRC and our licensees. Nonetheless, our licensees' primary responsibility of ensuring safe operation of their facilities, and the NRC's fundamental mission of protecting public health and safety, have not changed. Licensees' physical protection programs in place prior to September 11 were effective and have been significantly enhanced since September 11. Moreover, the NRC continues to work with a variety of agencies in an effort to develop an integrated national strategy for protecting critical infrastructure. We continue to work to ensure the adequate protection of public health and safety to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment.

I also want to acknowledge that the nuclear industry have been very cooperative in our efforts to enhance security. However, industry wants a clear understanding of what the collective government (Federal, State, and local) is doing to assume its appropriate responsibilities to protect all national assets from terrorist activities.

I appreciate being here today to discuss the NRC's programs. We are prepared to answer your questions.