



# NRC NEWS

## U.S. NUCLEAR REGULATORY COMMISSION

Office of Public Affairs

Telephone: 301/415-8200

Washington, DC 20555-001

E-mail: [opa@nrc.gov](mailto:opa@nrc.gov)

Web Site: <http://www.nrc.gov/OPA>

---

No. 01-112

September 21, 2001

### NRC REACTS TO TERRORIST ATTACKS

In light of the recent terrorist attacks, U.S. Nuclear Regulatory Commission officials and staff have been working around the clock to ensure adequate protection of nuclear power plants and nuclear fuel facilities. This has involved close coordination with the Federal Bureau of Investigation, other intelligence and law enforcement agencies, NRC licensees, and military, state and local authorities.

Immediately after the attacks, the NRC advised nuclear power plants to go to the highest level of security, which they promptly did. The NRC has advised its licensees to maintain heightened security. The agency continues to monitor the situation, and is prepared to make any adjustments to security measures as may be deemed appropriate.

In view of the recent unprecedented events, Chairman Richard A. Meserve, with the full support of the Commission, has directed the staff to review the NRC's security regulations and procedures.

A number of questions have come in from reporters and members of the public since the tragic events of September 11. The following questions and answers are offered in response:

Q: What would happen if a large commercial airliner was intentionally crashed into a nuclear power plant?

A: Nuclear power plants have inherent capability to protect public health and safety through such features as robust containment buildings, redundant safety systems, and highly trained operators. They are among the most hardened structures in the country and are designed to withstand extreme events, such as hurricanes, tornadoes and earthquakes. In addition, all NRC licenses with significant radiological material have emergency response plans to enable the mitigation of impacts on the public in the event of a release. However, the NRC did not specifically contemplate attacks by aircraft such as Boeing 757s or 767s and nuclear power plants were not designed to withstand such crashes. Detailed engineering analyses of a large airliner crash have not yet been performed.

Q: What measures have the NRC and its power plant licensees taken in face of this potential threat?

A: Immediately after the attacks, the NRC advised licensees to go to the highest level of security, which all did promptly. The specific actions are understandably sensitive, but they generally included such things as increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and limited access of personnel and vehicles to the sites.

Q: What, precisely, did the NRC do in response to the attacks?

A: At 10 a.m. on September 11, the NRC activated its Emergency Operations Center in headquarters and assembled a team of top officials and specialists. The same was done in each of its four regional offices. In addition to communicating with its licensees about the need to go to the highest level of security, the NRC established communications with the FBI, the Department of Energy, and the Federal Emergency Management Agency, among others. NRC personnel were dispatched to the FBI's Strategic Information Operations Center. The NRC has also established close communications with nuclear regulators in Canada and Mexico.

Q: What would happen if a large aircraft should crash into a spent fuel dry storage cask?

A: The capacity of spent fuel dry storage casks to withstand a crash by a large commercial aircraft has not been analyzed. Nonetheless, storage casks are robust and must be capable of withstanding severe impacts, such as might occur during tornadoes, hurricanes or earthquakes. In the event that a cask were breached, any impacts would be localized. All spent fuel storage facilities have plans to respond to such an emergency, drawn up in consultation with local officials.

Q: What if a large aircraft crashed into a spent fuel transportation cask in a heavily populated area?

A: Again, the capacity of shipping casks to withstand such a crash has not been analyzed. However, they are designed to protect the public in severe transportation accidents. The cask must be able to withstand a 30-foot drop, a puncture test, exposure to a 30-minute fire at 1475 degrees Fahrenheit, and submersion under water for an extended period. Moreover, the location of loaded casks is not publicly disclosed and such a cask would present a small target to an aircraft.

If an airliner crashed into a cask, there could be some localized impacts. Regulations require special accident response training of those involved in shipping, as well as coordination with state, local and tribal emergency response personnel. In addition, redundant communications must be maintained during shipment with the transporter vehicle; this would facilitate emergency response, if necessary.

Q: Could such a crash into a nuclear power plant, or a storage or shipping cask trigger a nuclear explosion?

A: No.

Q: What are the consequences if an airliner crashed into a uranium fuel cycle facility?

A: Because of the nature of the material, there would likely be only minimal off-site radiological consequences. Some such facilities use chemicals similar to those found at many industrial facilities.

In the event of a release, comprehensive emergency response procedures would be immediately implemented.

Q: Have nuclear power plants been subject to attack in the past?

A: There has never been an attack on a nuclear power plant. On very rare occasions there have been intrusions. For example, there was a 1993 car crash through the gates of Three Mile Island plant by an individual with a history of treatment for mental illness. Such intrusions have not resulted in harm to public health or safety.

Q: What are the normal security measures at commercial nuclear power plants.

A: Licensees are required to implement security programs that include well-armed civilian guard forces, physical barriers, detection systems, access controls, alarm stations, and detailed response strategies. NRC routinely inspects security measures as part of its normal reactor oversight process and periodically undertakes various exercises, including force-on-force exercises, so as to assure that any vulnerabilities are exposed and corrected .

Q: Is an attack using an airplane part of the NRC's design basis threat against which its licensees have to defend?

A: No. The NRC has been in close and continuing contact with law enforcement and the military regarding such a threat.

Q: What exactly is the so-called design basis threat?

A: The details of the design basis threat are classified, but it includes the characteristics of a possible sabotage attempt that NRC licensees are required to protect against. The agency continually assesses the adequacy of the design basis threat in consultation with local law enforcement and federal intelligence agencies.

Q:Is the NRC contemplating a modification of the design basis threat?

A: The agency will continue to coordinate with law enforcement and intelligence agencies to assess the implications of this new manifestation of terrorism. If the NRC determines that the design basis threat warrants revision, such changes would occur through a public rulemaking.

###