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Tighter security sought at N-plants

Terrorist threat dictates new standards, Union of Concerned Scientists says

By <u>Paul Choiniere</u> - <u>More Articles</u> Published on 03/12/2002

Relaxed regulations have left nuclear power plants needlessly vulnerable to terrorist attacks, according to the Union of Concerned Scientists, which called Monday for stricter rules on emergency backup power systems and on the handling of spent nuclear fuel.

The request for regulation changes came in the form of a petition to the Nuclear Regulatory Commission, the process by which the public can request changes in federal nuclear policy. The petition will be submitted to a review board for consideration.

Nuclear plants are dependent on power flowing in from utility lines to operate the water circulation system that cools the reactor and generates electricity. If that flow of power is lost, emergency diesel fuel generators take over the job. If those generators become unavailable, a reactor meltdown could occur.

Given the increased terrorist threat following the Sept. 11 attacks, the Union of Concerned Scientists contends that the potential for a terrorist attack on the power lines supplying electricity to nuclear plants has to be taken more seriously.

"The transmission lines and substations constituting the electrical grid are virtually unprotected targets for terrorists," the organization said in its petition. "Terrorists would not have to penetrate security fences or overpower armed guards to blow up transmission towers. Likewise, the switchyard at the typical nuclear power plant is outside the security perimeter fences and a relatively softer target than the nuclear plant itself."

Diesel generators should still be available to provide power after an attack. Older plants may have two generators ready for service, some newer plants as many as five. Original specifications for nuclear plants stated that no plant could operate for more than 72 hours without its full complement of diesel generators. If an emergency generator could not be returned to service by then, the reactor had to be shut down.

In recent years, the industry has persuaded the NRC to relax that standard for many plants, contending that even with a generator down enough power would be available from the remaining generator or generators to keep the reactor safe. In many cases, nuclear utilities now have up to 14 days to return a generator to service. Millstone 2 at Millstone Power Station in Waterford was granted such a change this year.

David Lochbaum, an engineer with the Union of Concerned Scientists, said it makes no sense to ease such a regulation. In its petition, the group seeks a return to the 72-hour rule.

Pete Hyde, a spokesman for Dominion Nuclear Connecticut, which owns Millstone, said the company would not comment on the merits of the petition. Hyde said Millstone is prepared to fully cooperate with any changes ordered by the NRC.

Lengthening the time that diesel generators can be out of service has helped the industry keep reactors operating, said Lochbaum. Maintenance work on diesel generators that once could only be done while a reactor was shut down for refueling can now be done while the reactor is operating, even if it takes two weeks. Keeping reactors operating and reducing the length of refueling outages are key factors in making nuclear plants competitive in a deregulated energy market.

In its petition, the Union of Concerned Scientists also asks for new standards for spent fuel pool operations. These pools are used to store and cool uranium-filled fuel rods after they are removed from the reactor. At some facilities, the superheated fuel rods could cause storage pools to boil in as few as eight hours if cooling systems were lost, causing a release of radiation, Lochbaum said.

Lochbaum's organization wants a rule that storage pools be managed in such a way that no boiling could occur for 24 hours, even if cooling systems were lost. That would provide more opportunity for emergency steps to be taken to stabilize the pool following a terrorist attack. Such a change could mean moving fuel into the pool more gradually during a refueling, delaying a restart by a day or two, Lochbaum said.

The Nuclear Energy Institute, which represents the interests of the nuclear industry, has no comment on the petition, said spokesman Melanie Lyons.

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