Nuclear Industry Plans Rescue Wagon for Disasters

RAY HENRY,Associated Press

ATLANTA (AP) — If disaster strikes a nuclear power plant in the U.S., the utility industry wants the ability to fly in heavy-duty equipment that could avert a meltdown.

That capability is part of a larger industry plan being developed to meet new rules that emerged since a 2011 tsunami struck the Fukushima Dai-ichi nuclear plant in Japan, flooding its emergency equipment and causing nuclear meltdowns that sent radiation leaking into the environment. The tsunami exceeded the worst-case scenario the plant was designed to withstand, and it showed how a widespread disaster that damages a nuclear plant can complicate emergency plans.

The effort, called FLEX, is the nuclear industry's method for meeting new U.S. Nuclear Regulatory Commission rules that will force 65 plants in the U.S. to get extra emergency equipment on site and store it protectively. As a backup, the industry is developing regional hubs in Memphis, Tennessee, and Phoenix , Arizona, that could truck or even fly in more equipment to stricken reactors. Industry leaders say the effort will add another layer of defense in case a Fukushima-style disaster destroys a nuclear plant's multiple backup systems.

"It became very clear in Japan that utilities became quickly overwhelmed," said Joe Pollock, vice president for nuclear operations at the Nuclear Energy Institute, an industry lobbying group that is spearheading the effort.

Nuclear industry watchdogs are concerned that by moving first, the utility industry is attempting to head-off more costly and far-reaching requirements that might otherwise be set by the NRC, which oversees commercial nuclear power plants in the U.S. Plants started buying the new equipment even before NRC regulators approved the concept. Industry officials say they are not certain yet how the equipment would be moved in a crisis.

"That presented essentially facts-on-the-ground for the NRC and essentially gave the industry the upper hand in how this is going to play out," said Edwin Lyman, the senior scientist for the Union of Concerned Scientists, who criticized FLEX as a "window-dressing exercise."

U.S. nuclear plants already have backup safety systems and are supposed to withstand the worst possible disasters in their regions, including hurricanes, tornadoes, floods and earthquakes. But planners can be wrong.

The Japanese utility TEPCO dismissed scientific evidence and geological history showing that the Fukushima Dai-ichi plant was susceptible to being struck by a far

bigger tsunami than it said was possible. Dominion Virginia Power's North Anna Power Station was struck by a 2011 tremor that caused peak ground movement at about twice the level for which the plant was designed. It did not suffer major damage and has resumed operations.

The FLEX program is supposed to help nuclear plants handle the biggest disasters. The equipment is meant to assist in the most critical tasks during a crisis: keeping nuclear fuel cool, keeping radioactive barriers intact and making sure old stores of used nuclear fuel don't overheat. If a cooling system fails and nuclear fuel gets too hot, the heat and pressure can rupture a reactor or even cause explosions that send radiation into the environment.

Utility companies must tell federal regulators early next year what equipment they are buying as part of the effort. Those supplies could include portable pumps, generators, batteries and chargers, compressors, hoses, tools and temporary flood barriers, according to industry plans filed with the NRC. Plant operators started buying some of this supplemental equipment to comply with disaster rules stemming from the Sept. 11, 2001, terrorist attacks. The cost for individual plants is not yet clear.

Under the plan, plant operators can summon help from the regional centers in Memphis and Phoenix. Both centers are near transportation hubs and spread out so a single disaster would be unlikely to cripple them both. In addition to having several duplicate sets of plant emergency gear, industry officials say the centers will likely have heavier equipment. That could include an emergency generator large enough to power a plant's emergency cooling systems, equipment to treat cooling water and extra radiation protection gear for workers.

Federal regulators must still decide whether to approve the plans submitted by individual plants. The NRC wants to see enough planning to make sure equipment such as emergency pumps could be transported and effectively used.

"They need to show us not just that they have the pump, but that they've done all the appropriate designing and engineering so that they have a hookup for that pump," NRC spokesman Scott Burnell said. "They're not going to be trying to figure out, 'Where are we going to plug this thing in?'"

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