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German nuclear plants lack protection, NGOs say



A smokescreen won't protect nuclear plants from all hazards

Germany's nuclear power plants are surrounded by fences and guarded by security personnel. But NGOs say they're inadequately protected from floods, earthquakes and fire - and possibly also from terrorist attacks by air.

Germany has 12 nuclear power plants with a total of 17 reactor blocks. Nineteen reactor blocks, many of them built in the early 1960s and 1970s, were shut down because they did not comply with current security standards.

Shortly after the 9/11 terrorist attacks on the US, the German government pledged to safeguard local nuclear power plants from terrorist attacks, and commissioned a survey in the US on how to protect the plants against plane crashes and armor-piercing weapons. Proposals included fortifying the reactor blocks' walls with extra thick two-to-three-meter concrete walls, laying out steel nets and installing smokescreens.

It is not clear, however, whether any of those measures were implemented.

Top secret

The nuclear power plant operators, major electric companies, the Environment Ministry's supervisory bodies and the Organization for Reactor Safety (GRS) have all remained silent on the issue.



Nuclear reactors are vulnerable to flames, floods and earthquakes

But NGOs like International Physicians for the Prevention of Nuclear War (IPPNW) and Greenpeace have not been as reticent. Both conducted research of their own.

"Not one of the German nuclear power plants is protected from a large aircraft crashing into it," Tobias Riedl of Greenpeace told Deutsche Welle. "The danger is even more pronounced at older plants, their walls are much thinner, so that even a smaller aircraft crashing could lead to great damage."

With that in mind, the GRS suggested installing a special device in passenger aircraft that would automatically reroute a plane should it drift from its course while approaching a nuclear power plant. Authorities have declined to comment on whether such devices have been installed.

Worst-case scenario

However, at the Philippsburg plant, 30 kilometers (19 miles) from the city of Karlsruhe, operators have begun to build a smokescreen that would make the area disappear from view behind thick plumes of smoke within 40 seconds.



Satellites and GPS can control airplanes

But smokescreens are not very effective, Riedl said.

"Tests have shown that planes can be controlled via GPS and satellites, but there is no way you can deactivate the GPS coordinates," he said. "Smokescreen concepts don't take the problem seriously and would not increase safety."

Henrik Paulitz of IPPNW said that a plane crash was just one danger; any kind of fire was a real threat.

"Flames that approach a nuclear plant, a fire in a transformer that prompts the disconnection of the reactor from the national grid - all that can lead to the ultimate worst case scenario," he said.

The threat of natural disasters

Earthquakes can be a problem, too, Paulitz said. The Biblis B plant in the state of Hesse was not equipped for earthquakes of the magnitude that could occur in the region, he said.

Flooding also posed a problem: "That's a threat because the nuclear power plant might have to be disconnected from the power grid, and that can go wrong," Paulitz said.

The law obliges nuclear power plant operators to upgrade their security measures - but only in so far as the cost and effort are reasonable.

A 1989 GRS study says that a major accident in German nuclear power plants can be expected once every 33,000 years.

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