

Oda Becker

Dipl. Physikerin Oda Becker arbeitet seit rund 20 Jahren als unabhängige Wissenschaftlerin im Bereich Sicherheit und Risiko von Atomanlagen. Von 2006 bis 2011 hatte sie eine Verwaltungsprofessur an der Hochschule Hannover.



Oda Becker erstellte zahlreiche Studien zu Atomkraftwerken und Zwischenlagern, unter anderem zur Bewertung der Auswirkungen von möglichen Terrorangriffen (z. B. absichtlicher Flugzeugabsturz und Beschuss mit panzerbrechenden Waffen), von Leistungssteigerungen und Hochwasserereignissen. Weitere Themen sind: Situation am AKW Standort Tschernobyl; Ergebnisse des Europäischen Stress Tests; Ausbreitungsrechnungen infolge von Freisetzungen nach schweren Reaktorunfällen. Sie arbeitete an vielen Fachstellungen im Rahmen von nuklearrelevanten UVP-Verfahren (z. B. KKW Paks/Ungarn; KKW Hinkley Point C/UK und KKW Mochovce/Slowakei) im Auftrag der österreichischen Regierung mit. Zu ihren Auftraggebern gehören neben der österreichischen Regierung auch Stadtverwaltungen, Bürgerinitiativen, Umweltorganisationen und Greenpeace.

Abstract

Drone overflights threaten French nuclear facilities

In autumn 2014, a number of still unidentified drones flying over French nuclear power plants (NPPs) have attracted the attention of the public and of authorities.

The presentation will not go into the many speculative ideas regarding the background of these overflights. The subject is rather the question of what dangers are associated with such drone overflights – were they to be carried out by a terrorist group.

In light of the current situation, the old NPPs at Fessenheim, Gravelines and Cattenom near France's borders with Belgium, Luxembourg, Germany and Switzerland have been used as examples to investigate the risks that can arise from terrorist attacks.

To date, military use has not included smaller, easily transportable drones carrying "standard" weapons or explosive munitions. But it is undisputed that the importance of drones as an instrument for reconnaissance will keep increasing.

Civilian drones are already available for purchase in greatly varying models. They are frequently used for aerial photography, but they can have a variety of other uses. Civilian drones that could transport several kilograms are already commercially available.

A crash of several drones, each carrying several kilos of explosives, against a NPP can cause a dangerous situation. Although the safety systems of a NPP would probably cope with the situation, no one could fully guarantee that radioactive materials would not be released as a consequence of such an attack.

Civilian drones, however, pose a threat if they are used for "reconnaissance". Drones can transmit detailed images of a NPP, its resources and the strategies used by its security personnel. This could substantially increase the success of an attack and thus make it more "attractive" for a terrorist group.

The objective of this presentation is to investigate whether there are conceivable terror scenarios that make a core melt accident with large release of radioactive substances almost inevitable.

In view of the availability and potential uses of drones, and taking the vulnerability of French nuclear power plants into account, three basic scenarios seem to be most plausible:

- An attack with explosives supported by so-called insiders. Beforehand, drones successfully practice approaching the NPP.
- Preparations for a potential aerial attack. This includes in particular investigating the NPP's protection systems.
- Preparations for a potential ground attack. This includes gathering information about the NPP and its current security measures.

These three scenarios will be discussed in some detail. The presentation based on a study commissioned by Greenpeace and published in November 2014.

Please note: During the following discussion on the risk of terrorist attacks, no indications will be made or thoughts expressed that could have instructional character and be "helpful" in planning or carrying out an attack. Terrorists with the skills, knowledge and resources to carry out effective attacks will find no information here that they do not already have or can gain access to.