



BACKGROUND

Office of Public Affairs

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Drones and Nuclear Power Plant Security

The increasing availability and popularity of commercial unmanned aerial systems, or drones, have resulted in numerous reports of sightings over critical infrastructure facilities, such as nuclear power plants. While these sightings often make headlines, the Nuclear Regulatory Commission believes there are no risk-significant vulnerabilities at nuclear power plants that could be exploited by adversarial use of currently available commercial drones.

The Federal Aviation Administration issued a Notice to Airmen in 2004 advising private pilots to avoid airspace over nuclear power plants; this notice was later revised to include drone overflights. In late 2019, the nuclear industry began coordinating with the Department of Energy and the FAA to explore the possibility of restricting drone overflights of nuclear power plants.

The NRC asks nuclear power plant licensees to voluntarily report any sightings of drones over their protected areas. The NRC relays this information to state and local authorities, the FAA and the FBI. Nuclear power plant security forces do not have authority to attempt to interdict or shoot down aircraft flying over their facilities. This includes drones.

Technical Analysis

As the frequency of drone sightings at nuclear power plants increased, the NRC initiated a technical analysis with Sandia National Laboratory to gauge the extent of the threat drones pose. That assessment is classified, but an unclassified executive summary was released in October 2019 ([ML19302E409](#)).

The technical analysis concluded that U.S. nuclear power plants do not have any risk-significant vulnerabilities that could be exploited by adversaries using commercially available drones to result in radiological sabotage, theft or diversion of special nuclear material (essentially the reactor fuel). In addition, the study concluded that any information an adversary could glean from overhead surveillance using drones is already accounted for in the NRC's [design-basis threat](#), which assumes adversaries have insider information about the plant and its operations.

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