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Sommario/riassunto	Thin Safety Margin charts the history of SEFOR, a twenty-megawatt reactor that operated for three years in the rural Ozark Mountains of Arkansas as part of an internationally sponsored program designed to demonstrate the Doppler effect in plutonium-oxide-fueled fast reactors. Authors Jerry Havens and Collis Geren draw upon this history to assess the accidental explosion risk inherent in using fast reactors to reduce the energy industry's carbon dioxide emissions.If a sufficiently powerful fast-neutron explosion were to cause the containment of a reactor such as SEFOR's to fail, the reactor's radiotoxic plutonium fuel could vaporize and escape into the surrounding environment, resulting in a miles-wide swath of destruction. The demonstration that the Doppler effect could prevent limited runaway reactivity in the event of an accident or natural disaster proved a critical development in

producing safe nuclear technology. But while SEFOR was hailed as a breakthrough in nuclear safety, Havens and Geren's examination of the project, including the partial SCRAM that occurred in late 1970, confirms experts' concerns regarding the limits of the Doppler effect and presents a compelling argument for caution in adopting fast reactors like SEFOR to reduce carbon emissions.

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