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Sommario/riassunto	<p>After description of the uranium / plutonium fuel cycle results are reported for various isotopic compositions of reactor-grade plutonium for usability in hypothetical nuclear explosive devices. It is shown that it is mainly thermal analyses, besides neutron physics analyses, which indicate the limits of concentration of the Pu-238 plutonium isotope. Above these limits, such hypothetical nuclear explosive devices are not feasible technically. In the light of this finding, future proliferation-proof fuel cycles are proposed which make use of recent methods of actinide transmutation. The author is honorary professor at the Karlsruhe Institute of Technology (KIT) and emeritus director of the former Institute for Neutron Physics and Reactor Engineering of the former Karlsruhe Research Center. For many years he was a member and, for some time, chairman of the German Advisory Committee on Reactor Safeguards (RSK). He is a member of the European Nuclear Society (ENS) and a member and fellow of the American Nuclear Society (ANS).</p>