

TECHNICAL CONSIDERATIONS IN NUCLEAR TERRORISM

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ABSTRACT

Nuclear terrorism is an evil application of nuclear energy, in the same way that chemical and biological terrorism could be considered as the evil side of chemistry and biology. This paper presents two effects of nuclear terrorism. First, dirty bombs or radioactive bombs or radiological dispersion devices (RDDs), and second, crude atom bombs or improvised nuclear devices (INDs). The paper analyses as well the probabilities of an attack, its biological effects and nuclear risk.

Experiments carried out so far indicate that the lethal effects produced by RDDs are likely the same that the effects produced by the chemical explosive used in the bomb. These type of bombs are rather bounded to generate panic and have implicit a high cost of decontamination. It will be described the measures to be adopted.

INDs will be also considered. Uranium INDs by gun-method are more feasible to be made. They can be disassembled and their components transported to the target place. Plutonium INDs by the implosion-method are complex and required high precision technology. Their disassembly is very difficult.

This paper analyzes too the illicit aspect of uranium and plutonium traffic.