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Establishing "design basis threat" in Norway

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ABSTRACT

INFCIRC 225 (Rev. 4) assumes that a State's physical protection system should be based on the State's evaluation of the threat, and that this should be reflected in the relevant legislation. Other factors should also be considered, including the State's emergency response capabilities and the existing and relevant measures of the State's system of accounting for and control of nuclear material. A design basis threat developed from an evaluation by the State of the threat of unauthorized removal of nuclear material and of sabotage of nuclear material and nuclear facilities is an essential element of a State's system of physical protection. The State should continuously review the threat, and evaluate the implications of any changes in that threat for the required levels and the methods of physical protection.

As part of a national design basis threat assessment, this paper evaluates the risk of nuclear or radiological terrorism and sabotage in Norway. Possible scenarios are presented and plausible consequences are discussed with a view to characterize the risks. The need for more stringent regulatory requirements will be discussed, together with the (positive) impact of improved systems and procedures of physical protection on nuclear emergency planning. Special emphasis is placed on discussing the design basis threat for different scenarios in order to systemize regulatory efforts to update the current legislation, requirement for operators' contingency planning, response efforts and the need for emergency exercises.