

PATRAM 2010 CALL FOR PAPERS – ABSTRACT

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TRANSPORTATION OF NUCLEAR MATERIALS – OPENINGS FOR THE TERRORIST THREAT

Things have moved on following the tragic events of 11th September, 2001. The depth of planning, approach, materials and methods deployed for terrorist acts have not only acquired greater sophistication but the very asymmetric nature of terrorist campaigns provides the perpetrators with choice of target and, with this, the upper hand of when and where to strike.

Operators of existing and the designers of new, fixed nuclear facilities are able, in the main, to counter the terrorist threat by a combination of physical, built-in resilience and effective counter-intelligence as a resolve against or, at least, to offset the terrorist threat. The adaption of the proven Defence-in-Depth approach to draw malicious acts into the accepted wisdom of the general nuclear safety for fixed nuclear facilities does not, however, fit comfortably to the transportation of radioactive materials and wastes. Indeed, the growing rates of old nuclear plant decommissioning, movements of radioactive waste, spent and new fuels, together with the growing range of industrial and medical isotope movements, all provide a broad range of possible targets for terrorist attack.

The proposed paper examines the increasing and diversity of transportation movements of radioactive substances and the effectiveness of the national and international security cover for these. Regard is given to the continuing concern of the International Atomic Energy Agency on the vulnerability of the transportation stage and the continuing, and admittedly sometimes ill-understood and overly negative, public perception of all things nuclear

The conclusions of the proposed paper are that national and international terrorist threats are present and will most likely persist over the decades; it reasons how the risk of successful terrorist attack might be quantified; it explores the almost symbiosis that could develop between defender and attacker; it examines how the national and international regulatory systems assess the risks and consequences behind closed doors in an unaccountable way; and it concludes that if, as expected, nuclear shipments are to or have already become attractive targets to terrorists then, to effectively counter this, a fundamental reassessment of the risks and hazards is required