

DEVELOPMENT OF A COMPREHENSIVE SECURITY PLAN FOR RADIOACTIVE WASTE DISPOSAL FACILITIES IN MALAYSIA

Any criminal or intentional unauthorized acts to critical infrastructures such as radioactive waste disposal facilities would undermine efforts to protect people, property, society and the environment either directly or indirectly through exposure to ionising radiation. With the aim of preventing a malicious act, a security measures should be design to deter malicious acts, detect and delay any unauthorized access or unauthorized removal of the radioactive material. A security plan document sets out the security measures that the facility implements to prevent the loss, sabotage, illegal use, illegal possession or illegal removal of sealed sources throughout their entire lifecycle, including while they are in storage or during transportation. The preparation of security plan document is adequately in line with the Nuclear Security Series Recommendation On Radioactive Material and Associated Facilities (NSS 14) to implement one of the basic security function which is a security management. Over the years the Malaysian Nuclear Agency (Nuclear Malaysia) has grown to become a leader for Research & Development on waste technology activities including radioactive waste management, processing and disposal, which includes sitting for a national repository. The Radioactive Waste Disposal Facility operates in accordance with the Atomic Energy Licensing Act (Act 304) 1984 and related subsidiary regulation, enforced by the Atomic Energy Licensing Board (AELB) as a national regulatory body. The development of a comprehensive security plan is one of the license conditions that Nuclear Malaysia needs to be complied with when decided to build a Borehole Disposal Facility as the ultimate solution to the increasing number of category 3 -5 of Disused Spent Radioactive Sources (DSRS). The development of the document is based on the latest guideline document provided by the AELB, 'Security Plan Preparation Guide for Radioactive Material'(LEM/TEK 62 Sem.2). The preparation of this comprehensive document has proved to be a big challenge for Malaysia, that chose to be the first country to implement the disposal technology through the Borehole Disposal Facility, especially in describing best practises on security management that includes measures for both technical and administrative physical security, for facility not yet built. This document also completely described the overall nuclear security system to protect the radioactive material and related measure to threat level, response to any possible nuclear security event and the protection of sensitive information. This paper provides thoughts on how these challenges can be overcome and suggest improvements that can be made in the future to ensure the sustainability of nuclear security control in this facility is well established and guaranteed

Gender

Male

State

Malaysia

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