

Making Australian Nuclear Security Regime Fit for Purpose

This paper outlines the outcomes of reviews and reforms related to licencing elements of Australia's nuclear security regime. The Nuclear Non-Proliferation (Safeguards) Act 1987 [1] enables the grant of permits to nuclear operators and transporters. Permits specify regulatory requirements and can be tailored to be industry specific. Australia's application of State level physical protection is consistent with the international nuclear security guidelines for nuclear material and facilities [2]. However, the vast majority of Australian permit holders (licensees) have nuclear material holdings that are below Category III [2]. The elaboration of prudent management practices, applied at State level, led to the expansion of nuclear material categorisation to include a 'Category IV' nuclear material holdings for source and special fissionable materials and includes a series of categories for locations outside of facilities. This expanded categorisation allowed for a structured graded approach to physical protection measures, providing for uniform security requirements across industries with similar nuclear material holdings. Australia originally granted individualised permits to possess or transport nuclear material based on a developing security understanding and best practice at the time of issue. This permit format provided for discrete security performance requirements that was suitable for the limited numbers of Permit Holders at the time. However, as the number of permit holders increased, the need to increase efficiency necessitated the streamlining of permits. Starting in 2015, ASNO embarked on a reform of its permit system relating to physical protection and IAEA safeguards, into industry specific classes. Permits not only include the requirements for the protection of nuclear material and equipment, but also include the protection of associated nuclear technologies and information. Giving preference to a performance-based, as opposed to prescriptive-based, approach to compliance, permit formats allow for, and draw on the security maturity of each industry. The new permit classes accommodate for industry and functional differences including transport, mining, facilities, radiographers and other locations outside of facilities, but also address protection of associated nuclear technologies. Each type of permit includes specific limits on nuclear material holdings. So far, 23 permit classes have been established. The new permit format divides the document into a dedicated Permit section and a Compliance Code common to each class of industry. The Permit section includes all the individual Permit Holder's company details, total nuclear material holdings and includes any approved locations for the use and storage of nuclear material. This section also provides overarching security principles and detailed requirements for State and IAEA inspections. The Compliance Code holds all the physical protection (and IAEA safeguards) requirements that are common to all the permit holders for each class of permit. The level of detail is industry dependant and reflects the practical application of physical security required. To improve regulatory transparency, ASNO has published template versions of most of the permits and corresponding Compliance Codes on its website. By providing online access to permits, guidance material and glossary information, ASNO supports its newly introduced permit holder's online access portal. This web based platform is an access controlled database for material accounting and transport of nuclear material by permit holders. Australian industry and regulatory terminology do not always align with Agency terms [3][4] and historically ASNO permits and forms have had individualised glossaries. ASNO has developed a general glossary of terminology that strives to increase commonality of terms and limiting terminology conflicts across all permit classes. The glossary includes IAEA specific terms for reference. This paper will expand on the reform process, outcomes, lessons learned and planned actions to further improve the permit system and Australia's national security regime.

REFERENCES:

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