

Cross-checking accounting and transportation data: a systematic action towards security

IRSN is the French Technical Support Organization in nuclear and radiation risks and its activities cover all the related scientific and technical issues. Among these numerous activities, it carries out the centralised accountancy of nuclear materials as part of the control of these materials under the authority of the Ministry of Energy (MTES). Within the context of the national regulation, a daily report for any inventory change has to be transmitted to the centralised accountancy by the authorized operators. The centralized accountancy processes every working day the accounting records sent by all the facilities in the country. These records include a lot of information such as the accountancy zone in which the activity occurred, type of nuclear material, characteristics and quantities, etc. By crossing this accounting information, a computerised system verifies the validity of the data and their consistency (e. g. matching of the accounting data between shipper and receiver, availability in stocks, respect of international obligations). The data are if necessary, corrected by the operators and lead for each accountancy zone to monthly accounting reports.

IRSN supports also the Ministry of Energy in the management and monitoring of nuclear materials transport with the so-called Echelon Opérationnel des Transports (EOT) which is the French nuclear material Transport Control Center. Prior to the authorization of any transport and during the transport, data describing the nuclear material are requested by EOT pursuant to the national regulation. These data are recorded in a specific database dedicated to transport activities.

It is then possible to cross-checked the transport data with those of the centralized accountancy in order to identify any inconsistency. Errors, irregularities or omissions can thus be detected in declarations, deterring malevolent actions. Ways for efficiency improvement and reinforcing the methodology are being considered: creation of a unique common key clearly identifying the material's shipment in the two distinct databases (accounting and transport) and providing of a valuable reporting. As a matter of fact, a specific field identifying the transport "ID" on the accounting report daily transmitted to the centralized accountancy could be used to create a direct link to the transportation database. In addition, a valuable reporting with possibility of sorting will help harness the wealth of numerous available data and shorten the processing time.

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Gender

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