

Operational Controls and Additional Administrative Controls for Safe and Secure Transport of Radioactive Material in Pakistan

Several shipments of radioactive material take place both domestically and internationally. The effective controls required both safety and security measures being well placed when radioactive material is moved. The responsibilities of the consignor, consignee, carrier, regulatory bodies, modal authorities, border and law enforcement agencies play an important role in defining and implementing the operational control measures. IAEA SSR-6 defines "Transport" as set of all operations and conditions associated with and involved in the movement of radioactive material; these include design, manufacture, maintenance and repair of the packaging and the preparation, consigning, loading, carriage, including in transit storage, transit, shipment after storage, unloading and receipt at the final destination.

This paper will cover the operational part of transport of radioactive material. Since the safety and security concerns are elevated for radioactive material on move as compared to those in storage. All entities involved are required to play an effective role in establishing and implementing a harmonized regime for both safe and secure transport.

PNRA as a regulatory body has established comprehensive requirements for both safety and security for operational control measures during shipment. These include measures for radiation protection, emergency management, contamination controls and segregation, consideration for other dangerous goods transport, handling of shipment including loading and unloading, security protocols, storage in transit and transit, mode specific measures, emergency planning and response, notification of shipments and communication with respect to transport of radioactive material. This paper will outline how a balanced approach is adopted to ensure implement of safety specific operational control measures from preparation of consignment till its delivery at final destination in the light of revised PNRA regulations for "Safe Transport of Radioactive Material" - PAK/916 (Rev.1) and security measures in the light of PNRA "Regulations on Security of Radioactive Sources - (PAK/926)" and "Regulations on Physical Protection of Nuclear Material and Nuclear Installations —(PAK/925)". The paper will highlight additional administrative control measures which PNRA regulatory framework covers in addition/alteration to international framework depending on operational experience feedback and national practices. These include measure related to transit authorization and in-transit storage control measures, consignments notification and communication, placarding and additional emergency arrangements like change of route in case of elevated threats. Implementation of these additional requirements pose some challenges which would also be discussed in this paper.

Country or International Organization

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Track Classification: Track 1 Legislative and Regulatory Framework for Safe and Secure Transport