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Licensing of Independent Carrier of Radioactive Material: A Novel Regulatory Experience in Pakistan

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Synopsis: (Theme and Topic: Safety and Security by Design- Regulatory and Industry Perspective)

Radioactive material is commonly used in medicine, industry, research & education for peaceful purposes. For such purposes, radioactive material needs to be shipped from one location to another. Shipment of radioactive material can be through various modes including sea, rail, road and air.

Activities related to shipment of radioactive material are regulated with a graded approach to ensure protection of the human and environment from harmful effects of ionizing radiation during transport of radioactive material. The amount and type of radioactivity present in the shipment determines how it can be transported and what kind of controls are required. Some materials that are very low in radioactivity can be shipped with no, or very limited, controls. Other materials that are highly radioactive and could pose a danger to the public require controlled routes, safety measures, extra security and notifications to state and local officials.

PNRA regulations for the safe transport of radioactive material - PAK/916, Rev.1 defines carrier as “any person, organization or government undertaking the carriage of radioactive material by any means of transport. PNRA regulations further elaborate roles and responsibilities of consignor, consignee and carrier to ensure safe transport of radioactive material.

In public sector organizations, the role of consignor, consignee and carrier is mainly being played by the same entity, however; this is the first time that a private company showed intent for getting authorization from PNRA as an independent carrier to transport category IV and V radioactive sources by road within Pakistan. The explicit requirements to authorize a carrier as an independent entity to transport radioactive material were not addressed in the regulatory framework. Accordingly, to cater this request, a regulatory process was established to authorize an entity as a carrier of radioactive material and the same was followed, with due consideration to the graded approach, to issue the first ever license as carrier of radioactive material in Pakistan by road.

This paper elaborates the step wise regulatory approach opted by PNRA to establish the process and details of activities for issuing license as carrier of radioactive material.