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”IT enabled door-delivery based, Pan India logistics of Radiopharmaceuticals and other radioactive consignments through outsourced carrier –A paradigm change in Indian Context”

Board of Radiation and Isotope Technology (BRIT) - A unit of Department of Atomic Energy, Government of India was constituted in the year 1989 and mandated to serve the nation through Radiation and Isotope Technology. Since then, it has been serving the nuclear medicine and industrial sector in the country with host of radiopharmaceutical products and industrial radiography exposure devices, which are manufactured in its production centre in Mumbai and subsequently distributed across the nation. Until July 2021, clients of BRIT, had the sole option of making their own arrangements for the collection of these radioactive consignments from the nearest airports at their location or by arranging surface transportation between BRIT and their location on their own. BRIT used to make the arrangements for the Air Cargo bookings at Mumbai. Amidst changing business environment, BRIT embarked upon the novel initiative for IT enabled safe, secure and timely Pan India door delivery of radiopharmaceuticals and radiography cameras, by selecting and authorising a competent outsourced carrier for this demanding task. Emerging as a gamechanger, this IT enabled unique logistics service has been well acclaimed by the stakeholders of BRIT and has been providing client centric timely logistics services with full compliance to extant statutory and regulatory provisions in the country for the safe and secure transportation of the radioactive consignments in public domain. Until April 2025, BRIT has provided nationwide door delivery of over several thousand consignments of radiopharmaceuticals and radiography cameras with no single deviation from the normal conditions of operation from safety and security standpoint with scrupulous Person-Sv budgeting. Capitalising on the myriad capabilities of IT enabled features of the logistics services, entire supply chain has now been ensuring real time tracking of the radioactive consignments from the instance of order placement until ultimate delivery thus enabling optimum resource utilisation and prudent business planning. The selection of a suitable logistics service provider using Quality and Cost based selection had myriad challenges considering safety and security of radioactive consignments while Pan India transportation in public domain. Scrupulously laid penal provisions have been incorporated for any safety and security centric deviations by the carrier. Quantitative evolution of the performance of the carrier periodically has been devised for the entire contract period stipulating minimum quantitative performance criteria. Special emphasis has been accorded to periodic safety training requirements. As of now the extant regulation in the country recognises only the Consignor and the Consignee of the radioactive consignments. The operational experience of BRIT gained through this paradigm change is expected to pave the way for formal recognition of the outsourced carrier for transportation of radioactive consignments in the country. Recognition of the carrier as an independent agency under the regulatory framework shall bolster the eco system for safe and secure Transportaion of radioactive consignments as carrier would be directly accountable to the regulatory authority. In future BRIT would also endeavour to bring the footprints of Emerging Technologies into this web-based services for overall improvement. In future efforts would also be made to reflect upon the carbon foots prints of the logistics service modalities (Surface/Air) into the final cost of the radioactive consignments keeping the safety and security paramount. This paper attempts to provide a wholistic insight into this paradigm change entailing the challenges faced right from the selection of an authorised logistics service provider for this safety and security centric time sensitive task, its pros and cons, operational experience gained and its overall impact on performance of BRIT.

Country or International Organization

Instructions

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